

elements are axially aligned with the second set of expansion elements.

242. An apparatus for radially expanding and plastically deforming an expandable tubular member, comprising:

- a support member;
- a cutting device for cutting the tubular member coupled to the support member;
- a gripping device for gripping the tubular member coupled to the support member;
- a sealing device for sealing an interface with the tubular member coupled to the support member;
- a locking device for locking the position of the tubular member relative to the support member;
- a first adjustable expansion device for radially expanding and plastically deforming the tubular member coupled to the support member;
- a second adjustable expansion device for radially expanding and plastically deforming the tubular member coupled to the support member;
- a packer coupled to the support member; and
- an actuator for displacing one or more of the sealing assembly, first and second adjustable expansion devices, and packer relative to the support member.

243. The apparatus of claim 242, wherein the gripping device comprises a plurality of movable gripping elements.

244. The apparatus of claim 243, wherein the gripping elements are moveable in a radial direction relative to the support member.

245. The apparatus of claim 243, wherein the gripping elements are moveable in an axial direction relative to the support member.

246. The apparatus of claim 243, wherein the gripping elements are moveable in a radial and an axial direction relative to the support member.

247. The apparatus of claim 243, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in a radial and an axial direction relative to the support member.

248. The apparatus of claim 243, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in a radial direction relative to the support member.

249. The apparatus of claim 243, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in an axial direction relative to the support member.

250. The apparatus of claim 243, wherein, if the tubular member is displaced in a first axial direction, the gripping device grips the tubular member; and wherein, if the tubular member is displaced in a second axial direction, the gripping device does not grip the tubular member.

251. The apparatus of claim 243, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, the gripping elements are biased to remain in the first position.

252. The apparatus of claim 243, wherein the gripping device further comprises:  
an actuator for moving the gripping elements from a first position to a second position;  
wherein in the first position, the gripping elements do not engage the tubular member;  
wherein in the second position, the gripping elements do engage the tubular member; and  
wherein the actuator is a fluid powered actuator.

253. The apparatus of claim 242, wherein the sealing device seals an annulus defined between the support member and the tubular member.

254. The apparatus of claim 242, wherein the packer assembly comprises:  
a packer; and  
a packer control device for controlling the operation of the packer coupled to the support member.
255. The apparatus of claim 254, wherein the packer comprises:  
a support member defining a passage;  
a shoe comprising a float valve coupled to an end of the support member;  
one or more compressible packer elements movably coupled to the support member;  
and  
a sliding sleeve valve movably positioned within the passage of the support member.
256. The apparatus of claim 254, wherein the packer control device comprises:  
a support member;  
one or more drag blocks releasably coupled to the support member; and  
a stinger coupled to the support member for engaging the packer.
257. The apparatus of claim 254, wherein the packer comprises:  
a support member defining a passage;  
a shoe comprising a float valve coupled to an end of the support member;  
one or more compressible packer elements movably coupled to the support member; and  
a sliding sleeve valve positioned within the passage of the support member;  
and  
wherein the packer control device comprises:  
a support member;  
one or more drag blocks releasably coupled to the support member; and  
a stinger coupled to the support member for engaging the sliding sleeve valve.
258. The apparatus of claim 242, wherein the actuator comprises:  
a first actuator for pulling the expansion device; and  
a second actuator for pushing the expansion device.
259. The apparatus of claim 242, wherein the actuator comprises means for transferring torsional loads between the support member and the expansion device.

260. The apparatus of claim 258, wherein the first and second actuators comprise means for transferring torsional loads between the support member and the expansion device.
261. The apparatus of claim 242, wherein the actuator comprises a plurality of pistons positioned within corresponding piston chambers.
262. The apparatus of claim 242, wherein the cutting device comprises:  
a support member; and  
a plurality of movable cutting elements coupled to the support member.
263. The apparatus of claim 262, further comprising:  
an actuator coupled to the support member for moving the cutting elements between  
a first position and a second position;  
wherein in the first position, the cutting elements do not engage the tubular member;  
and  
wherein in the second position, the cutting elements engage the tubular member.
264. The apparatus of claim 263, further comprising:  
a sensor coupled to the support member for sensing the internal diameter of the  
tubular member.
265. The apparatus of claim 264, wherein the sensor prevents the cutting elements from being moved to the second position if the internal diameter of the tubular member is less than a predetermined value.
266. The apparatus of claim 263, wherein the cutting elements comprise:  
a first set of cutting elements; and  
a second set of cutting elements;  
wherein the first set of cutting elements are interleaved with the second set of cutting elements.
267. The apparatus of claim 266, wherein in the first position, the first set of cutting elements are not axially aligned with the second set of cutting elements.
268. The apparatus of claim 266, wherein in the second position, the first set of cutting elements are axially aligned with the second set of cutting elements.

269. The apparatus of claim 242, wherein at least one of the adjustable expansion devices comprise:  
a support member; and  
a plurality of movable expansion elements coupled to the support member.
270. The apparatus of claim 269, further comprising:  
an actuator coupled to the support member for moving the expansion elements  
between a first position and a second position;  
wherein in the first position, the expansion elements do not engage the tubular  
member; and  
wherein in the second position, the expansion elements engage the tubular member.
271. The apparatus of claim 270, further comprising:  
a sensor coupled to the support member for sensing the internal diameter of the  
tubular member.
272. The apparatus of claim 271, wherein the sensor prevents the expansion elements  
from being moved to the second position if the internal diameter of the tubular member is  
less than a predetermined value.
273. The apparatus of claim 270, wherein the expansion elements comprise:  
a first set of expansion elements; and  
a second set of expansion elements;  
wherein the first set of expansion elements are interleaved with the second set of  
expansion elements.
274. The apparatus of claim 273, wherein in the first position, the first set of expansion  
elements are not axially aligned with the second set of expansion elements.
275. The apparatus of claim 273, wherein in the second position, the first set of expansion  
elements are axially aligned with the second set of expansion elements.
276. The apparatus of claim 242, wherein at least one of the adjustable expansion devices  
comprise a plurality of expansion devices.
277. The apparatus of claim 276, wherein at least one of the adjustable expansion devices

comprise:

- a support member; and
- a plurality of movable expansion elements coupled to the support member.

278. The apparatus of claim 277, further comprising:  
an actuator coupled to the support member for moving the expansion elements  
between a first position and a second position;  
wherein in the first position, the expansion elements do not engage the tubular  
member; and  
wherein in the second position, the expansion elements engage the tubular member.
279. The apparatus of claim 278, further comprising:  
a sensor coupled to the support member for sensing the internal diameter of the  
tubular member.
280. The apparatus of claim 279, wherein the sensor prevents the expansion elements  
from being moved to the second position if the internal diameter of the tubular member is  
less than a predetermined value.
281. The apparatus of claim 278, wherein the expansion elements comprise:  
a first set of expansion elements; and  
a second set of expansion elements;  
wherein the first set of expansion elements are interleaved with the second set of  
expansion elements.
282. The apparatus of claim 281, wherein in the first position, the first set of expansion  
elements are not axially aligned with the second set of expansion elements.
283. The apparatus of claim 281, wherein in the second position, the first set of expansion  
elements are axially aligned with the second set of expansion elements.
284. An apparatus for cutting a tubular member, comprising:  
a support member; and  
a plurality of movable cutting elements coupled to the support member.
285. The apparatus of claim 284, further comprising:  
an actuator coupled to the support member for moving the cutting elements between

a first position and a second position;  
wherein in the first position, the cutting elements do not engage the tubular member;  
and  
wherein in the second position, the cutting elements engage the tubular member.

286. The apparatus of claim 285, further comprising:  
a sensor coupled to the support member for sensing the internal diameter of the tubular member.
287. The apparatus of claim 286, wherein the sensor prevents the cutting elements from being moved to the second position if the internal diameter of the tubular member is less than a predetermined value.
288. The apparatus of claim 285, wherein the cutting elements comprise:  
a first set of cutting elements; and  
a second set of cutting elements;  
wherein the first set of cutting elements are interleaved with the second set of cutting elements.
289. The apparatus of claim 288, wherein in the first position, the first set of cutting elements are not axially aligned with the second set of cutting elements.
290. The apparatus of claim 288, wherein in the second position, the first set of cutting elements are axially aligned with the second set of cutting elements.
291. An apparatus for engaging a tubular member, comprising:  
a support member; and  
a plurality of movable elements coupled to the support member.
292. The apparatus of claim 291, further comprising:  
an actuator coupled to the support member for moving the elements between a first position and a second position;  
wherein in the first position, the elements do not engage the tubular member; and  
wherein in the second position, the elements engage the tubular member.
293. The apparatus of claim 292, further comprising:  
a sensor coupled to the support member for sensing the internal diameter of the

tubular member.

294. The apparatus of claim 293, wherein the sensor prevents the elements from being moved to the second position if the internal diameter of the tubular member is less than a predetermined value.
295. The apparatus of claim 292, wherein the elements comprise:  
a first set of elements; and  
a second set of elements;  
wherein the first set of elements are interleaved with the second set of elements.
296. The apparatus of claim 295, wherein in the first position, the first set of elements are not axially aligned with the second set of elements.
297. The apparatus of claim 295, wherein in the second position, the first set of elements are axially aligned with the second set of elements.
298. An apparatus for gripping a tubular member, comprising:  
a plurality of movable gripping elements.
299. The apparatus of claim 298, wherein the gripping elements are moveable in a radial direction.
300. The apparatus of claim 298, wherein the gripping elements are moveable in an axial direction.
301. The apparatus of claim 298, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in a radial and an axial direction.
302. The apparatus of claim 298, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in a radial direction.

303. The apparatus of claim 298, wherein the gripping elements are moveable from a first position to a second position; wherein in the first position, the gripping elements do not engage the tubular member; wherein in the second position, the gripping elements do engage the tubular member; and wherein, during the movement from the first position to the second position, the gripping elements move in an axial direction.

304. The apparatus of claim 298, wherein, in a first axial direction, the gripping device grips the tubular member; and wherein, in a second axial direction, the gripping device does not grip the tubular member.

305. The apparatus of claim 298, further comprising an actuator for moving the gripping elements.

306. The apparatus of claim 298, wherein the gripping elements comprise:  
a plurality of separate and distinct gripping elements.

307. An actuator, comprising:  
a tubular housing;  
a tubular piston rod movably coupled to and at least partially positioned within the housing;  
a plurality of annular piston chambers defined by the tubular housing and the tubular piston rod; and  
a plurality of tubular pistons coupled to the tubular piston rod, each tubular piston movably positioned within a corresponding annular piston chamber.

308. The actuator of claim 307, further comprising means for transmitting torsional loads between the tubular housing and the tubular piston rod.

309. An apparatus for controlling a packer, comprising:  
a tubular support member;  
one or more drag blocks releasably coupled to the tubular support member; and  
a tubular stinger coupled to the tubular support member for engaging the packer.

310. The apparatus of claim 309, further comprising a tubular sleeve coupled to the drag blocks.

311. The apparatus of claim 309, wherein the tubular support member comprises one or

more axially aligned teeth for engaging the packer.

312. A packer comprising:

- a support member defining a passage;
- a shoe comprising a float valve coupled to an end of the support member;
- one or more compressible packer elements movably coupled to the support member;
- and
- a sliding sleeve valve movably positioned within the passage of the support member.

313. A method of radially expanding and plastically deforming an expandable tubular member within a borehole having a preexisting wellbore casing, comprising:

- positioning the tubular member within the borehole in overlapping relation to the wellbore casing;
  - radially expanding and plastically deforming a portion of the tubular member to form a bell section; and
  - radially expanding and plastically deforming a portion of the tubular member above the bell section comprising a portion of the tubular member that overlaps with the wellbore casing;
- wherein the inside diameter of the bell section is greater than the inside diameter of the radially expanded and plastically deformed portion of the tubular member above the bell section.

314. The method of claim 313, wherein radially expanding and plastically deforming a portion of the tubular member to form a bell section comprises:

- positioning an adjustable expansion device within the expandable tubular member;
- supporting the expandable tubular member and the adjustable expansion device within the borehole;
- lowering the adjustable expansion device out of the expandable tubular member;
- increasing the outside dimension of the adjustable expansion device; and
- displacing the adjustable expansion device upwardly relative to the expandable tubular member n times to radially expand and plastically deform n portions of the expandable tubular member, wherein n is greater than or equal to 1.

315. A method for forming a mono diameter wellbore casing, comprising:

- positioning an adjustable expansion device within a first expandable tubular member;
- supporting the first expandable tubular member and the adjustable expansion device within a borehole;

lowering the adjustable expansion device out of the first expandable tubular member;  
increasing the outside dimension of the adjustable expansion device;  
displacing the adjustable expansion device upwardly relative to the first expandable tubular member  $m$  times to radially expand and plastically deform  $m$  portions of the first expandable tubular member within the borehole;  
positioning the adjustable expansion device within a second expandable tubular member;  
supporting the second expandable tubular member and the adjustable expansion device within the borehole in overlapping relation to the first expandable tubular member;  
lowering the adjustable expansion device out of the second expandable tubular member;  
increasing the outside dimension of the adjustable expansion device; and  
displacing the adjustable expansion device upwardly relative to the second expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the second expandable tubular member within the borehole.

316. A method for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

positioning an adjustable expansion device within the expandable tubular member;  
supporting the expandable tubular member and the adjustable expansion device within the borehole;  
lowering the adjustable expansion device out of the expandable tubular member;  
increasing the outside dimension of the adjustable expansion device;  
displacing the adjustable expansion mandrel upwardly relative to the expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the expandable tubular member within the borehole; and  
pressurizing an interior region of the expandable tubular member above the adjustable expansion device during the radial expansion and plastic deformation of the expandable tubular member within the borehole.

317. A method for forming a mono diameter wellbore casing, comprising:

positioning an adjustable expansion device within a first expandable tubular member;  
supporting the first expandable tubular member and the adjustable expansion device within a borehole;  
lowering the adjustable expansion device out of the first expandable tubular member;  
increasing the outside dimension of the adjustable expansion device;

displacing the adjustable expansion device upwardly relative to the first expandable tubular member  $m$  times to radially expand and plastically deform  $m$  portions of the first expandable tubular member within the borehole;  
pressurizing an interior region of the first expandable tubular member above the adjustable expansion device during the radial expansion and plastic deformation of the first expandable tubular member within the borehole;  
positioning the adjustable expansion mandrel within a second expandable tubular member;  
supporting the second expandable tubular member and the adjustable expansion mandrel within the borehole in overlapping relation to the first expandable tubular member;  
lowering the adjustable expansion mandrel out of the second expandable tubular member;  
increasing the outside dimension of the adjustable expansion mandrel;  
displacing the adjustable expansion mandrel upwardly relative to the second expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the second expandable tubular member within the borehole; and  
pressurizing an interior region of the second expandable tubular member above the adjustable expansion mandrel during the radial expansion and plastic deformation of the second expandable tubular member within the borehole.

318. A method for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

positioning first and second adjustable expansion devices within the expandable tubular member;  
supporting the expandable tubular member and the first and second adjustable expansion devices within the borehole;  
lowering the first adjustable expansion device out of the expandable tubular member;  
increasing the outside dimension of the first adjustable expansion device;  
displacing the first adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform a lower portion of the expandable tubular member;  
displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the expandable tubular member;  
decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;  
displacing the second adjustable expansion device upwardly relative to the

expandable tubular member to radially expand and plastically deform portions of the expandable tubular member above the lower portion of the expandable tubular member;

wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

319. A method for forming a mono diameter wellbore casing, comprising:
- positioning first and second adjustable expansion devices within a first expandable tubular member;
  - supporting the first expandable tubular member and the first and second adjustable expansion devices within a borehole;
  - lowering the first adjustable expansion device out of the first expandable tubular member;
  - increasing the outside dimension of the first adjustable expansion device;
  - displacing the first adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform a lower portion of the first expandable tubular member;
  - displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the first expandable tubular member;
  - decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;
  - displacing the second adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform portions of the first expandable tubular member above the lower portion of the expandable tubular member;
  - positioning first and second adjustable expansion devices within a second expandable tubular member;
  - supporting the first expandable tubular member and the first and second adjustable expansion devices within the borehole in overlapping relation to the first expandable tubular member;
  - lowering the first adjustable expansion device out of the second expandable tubular member;
  - increasing the outside dimension of the first adjustable expansion device;
  - displacing the first adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform a lower portion of the second expandable tubular member;
  - displacing the first adjustable expansion device and the second adjustable

expansion device downwardly relative to the second expandable tubular member;  
decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;  
and  
displacing the second adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform portions of the second expandable tubular member above the lower portion of the second expandable tubular member;  
wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

320. A method for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

positioning first and second adjustable expansion devices within the expandable tubular member;  
supporting the expandable tubular member and the first and second adjustable expansion devices within the borehole;  
lowering the first adjustable expansion device out of the expandable tubular member;  
increasing the outside dimension of the first adjustable expansion device;  
displacing the first adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform a lower portion of the expandable tubular member;  
pressurizing an interior region of the expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the expandable tubular member by the first adjustable expansion device;  
displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the expandable tubular member;  
decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;  
displacing the second adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform portions of the expandable tubular member above the lower portion of the expandable tubular member; and  
pressurizing an interior region of the expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the expandable tubular member above the lower portion of the expandable

tubular member by the second adjustable expansion device;  
wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

321. A method for forming a mono diameter wellbore casing, comprising:
- positioning first and second adjustable expansion devices within a first expandable tubular member;
  - supporting the first expandable tubular member and the first and second adjustable expansion devices within a borehole;
  - lowering the first adjustable expansion device out of the first expandable tubular member;
  - increasing the outside dimension of the first adjustable expansion device;
  - displacing the first adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform a lower portion of the first expandable tubular member;
  - pressurizing an interior region of the first expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the first expandable tubular member by the first adjustable expansion device;
  - displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the first expandable tubular member;
  - decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;
  - displacing the second adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform portions of the first expandable tubular member above the lower portion of the expandable tubular member;
  - pressurizing an interior region of the first expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the first expandable tubular member above the lower portion of the first expandable tubular member by the second adjustable expansion device;
  - positioning first and second adjustable expansion devices within a second expandable tubular member;
  - supporting the first expandable tubular member and the first and second adjustable expansion devices within the borehole in overlapping relation to the first expandable tubular member;
  - lowering the first adjustable expansion device out of the second expandable tubular

member;  
increasing the outside dimension of the first adjustable expansion device;  
displacing the first adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform a lower portion of the second expandable tubular member;  
pressurizing an interior region of the second expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the second expandable tubular member by the first adjustable expansion device;  
displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the second expandable tubular member;  
decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;  
displacing the second adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform portions of the second expandable tubular member above the lower portion of the second expandable tubular member; and  
pressurizing an interior region of the second expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the second expandable tubular member above the lower portion of the second expandable tubular member by the second adjustable expansion device;  
wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

322. A method for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:  
supporting the expandable tubular member, an hydraulic actuator, and an adjustable expansion device within the borehole;  
increasing the size of the adjustable expansion device; and  
displacing the adjustable expansion device upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform a portion of the expandable tubular member.

323. The method of claim 322, further comprising:  
reducing the size of the adjustable expansion device after the portion of the expandable tubular member has been radially expanded and plastically

deformed.

324. The method of claim 323, further comprising:  
fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member after reducing the size of the adjustable expansion device.
325. The method of claim 324, further comprising:  
permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator after fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member.
326. The method of claim 325, further comprising:  
injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and a preexisting structure after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
327. The method of claim 325, further comprising:  
increasing the size of the adjustable expansion device after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
328. The method of claim 327, further comprising:  
displacing the adjustable expansion cone upwardly relative to the expandable tubular member to radially expand and plastically deform another portion of the expandable tubular member.
329. The method of claim 328, further comprising:  
if the end of the other portion of the expandable tubular member overlaps with a preexisting structure, then  
not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator; and  
displacing the adjustable expansion cone upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform the end of the other portion of the expandable tubular member that overlaps with the preexisting structure.

330. A method for forming a mono diameter wellbore casing within a borehole that includes a preexisting wellbore casing, comprising:  
supporting the expandable tubular member, an hydraulic actuator, and an adjustable expansion device within the borehole;  
increasing the size of the adjustable expansion device;  
displacing the adjustable expansion device upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform a portion of the expandable tubular member; and  
displacing the adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform the remaining portion of the expandable tubular member and a portion of the preexisting wellbore casing that overlaps with an end of the remaining portion of the expandable tubular member.
331. The method of claim 330, further comprising:  
reducing the size of the adjustable expansion device after the portion of the expandable tubular member has been radially expanded and plastically deformed.
332. The method of claim 331, further comprising:  
fluidicly sealing the radially expanded and plastically deformed end of the expandable tubular member after reducing the size of the adjustable expansion device.
333. The method of claim 332, further comprising:  
permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator after fluidicly sealing the radially expanded and plastically deformed end of the expandable tubular member.
334. The method of claim 333, further comprising:  
injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and the borehole after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
335. The method of claim 333, further comprising:  
increasing the size of the adjustable expansion device after permitting the position of

the expandable tubular member to float relative to the position of the hydraulic actuator.

336. The method of claim 335, further comprising:  
displacing the adjustable expansion cone upwardly relative to the expandable tubular member to radially expand and plastically deform the remaining portion of the expandable tubular member.
337. The method of claim 336, further comprising:  
not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator; and  
displacing the adjustable expansion cone upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform the end of the remaining portion of the expandable tubular member that overlaps with the preexisting wellbore casing after not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
338. A method of radially expanding and plastically deforming a tubular member, comprising:  
positioning the tubular member within a preexisting structure;  
radially expanding and plastically deforming a lower portion of the tubular member to form a bell section; and  
radially expanding and plastically deforming a portion of the tubular member above the bell section.
339. The method of claim 338, wherein positioning the tubular member within a preexisting structure comprises:  
locking the tubular member to an expansion device.
340. The method of claim 339, wherein the outside diameter of the expansion device is less than the inside diameter of the tubular member.
341. The method of claim 339, wherein the expansion device is positioned within the tubular member.
342. The method of claim 339, wherein the expansion device comprises an adjustable

expansion device.

343. The method of claim 342, wherein the adjustable expansion device is adjustable to a plurality of sizes.

344. The method of claim 339, wherein the expansion device comprises a plurality of expansion devices.

345. The method of claim 344, wherein at least one of the expansion devices comprises an adjustable expansion device.

346. The method of claim 345, wherein at least one of the adjustable expansion device is adjustable to a plurality of sizes.

347. The method of claim 338, wherein radially expanding and plastically deforming a lower portion of the tubular member to form a bell section comprises:

lowering an expansion device out of an end of the tubular member; and  
pulling the expansion device through the end of the tubular member.

348. The method of claim 347, wherein lowering an expansion device out of an end of the tubular member comprises:

lowering the expansion device out of the end of the tubular member; and  
adjusting the size of the expansion device.

349. The method of claim 348, wherein the adjustable expansion device is adjustable to a plurality of sizes.

350. The method of claim 348, wherein the expansion device comprises a plurality of adjustable expansion devices.

351. The method of claim 350, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

352. The method of claim 347, wherein pulling the expansion device through the end of the tubular member comprises:

gripping the tubular member; and  
pulling an expansion device through an end of the tubular member.

353. The method of claim 352, wherein gripping the tubular member comprises:  
permitting axial displacement of the tubular member in a first direction; and  
not permitting axial displacement of the tubular member in a second direction.
354. The method of claim 352, wherein pulling the expansion device through the end of the tubular member comprises:  
pulling the expansion device through the end of the tubular member using an actuator.
355. The method of claim 338, wherein radially expanding and plastically deforming a portion of the tubular member above the bell section comprises:  
lowering an expansion device out of an end of the tubular member; and  
pulling the expansion device through the end of the tubular member.
356. The method of claim 355, wherein lowering an expansion device out of an end of the tubular member comprises:  
lowering the expansion device out of the end of the tubular member; and  
adjusting the size of the expansion device.
357. The method of claim 356, wherein the adjustable expansion device is adjustable to a plurality of sizes.
358. The method of claim 356, wherein the expansion device comprises a plurality of adjustable expansion devices.
359. The method of claim 358, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.
360. The method of claim 355, wherein pulling the expansion device through the end of the tubular member comprises:  
gripping the tubular member; and  
pulling an expansion device through an end of the tubular member.
361. The method of claim 360, wherein gripping the tubular member comprises:  
permitting axial displacement of the tubular member in a first direction; and  
not permitting axial displacement of the tubular member in a second direction.

362. The method of claim 360, wherein pulling the expansion device through the end of the tubular member comprises:

pulling the expansion device through the end of the tubular member using an actuator.

363. The method of claim 355, wherein pulling the expansion device through the end of the tubular member comprises:

pulling the expansion device through the end of the tubular member using fluid pressure.

364. The method of claim 363, wherein pulling the expansion device through the end of the tubular member using fluid pressure comprises:

pressurizing an annulus within the tubular member above the expansion device.

365. The method of claim 338, wherein radially expanding and plastically deforming a portion of the tubular member above the bell section comprises:

fluidically sealing an end of the tubular member; and  
pulling the expansion device through the tubular member.

366. The method of claim 365, wherein the expansion device is adjustable.

367. The method of claim 366, wherein the expansion device is adjustable to a plurality of sizes.

368. The method of claim 365, wherein the expansion device comprises a plurality of adjustable expansion devices.

369. The method of claim 368, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

370. The method of claim 365, wherein pulling the expansion device through the end of the tubular member comprises:

gripping the tubular member; and  
pulling an expansion device through an end of the tubular member.

371. The method of claim 370, wherein gripping the tubular member comprises:

permitting axial displacement of the tubular member in a first direction; and

not permitting axial displacement of the tubular member in a second direction.

372. The method of claim 370, wherein pulling the expansion device through the end of the tubular member comprises:

pulling the expansion device through the end of the tubular member using an actuator.

373. The method of claim 365, wherein pulling the expansion device through the end of the tubular member comprises:

pulling the expansion device through the end of the tubular member using fluid pressure.

374. The method of claim 373, wherein pulling the expansion device through the end of the tubular member using fluid pressure comprises:

pressurizing an annulus within the tubular member above the expansion device.

375. The method of claim 338, wherein radially expanding and plastically deforming a portion of the tubular member above the bell section comprises:

overlapping the portion of the tubular member above the bell section with an end of a preexisting tubular member; and

pulling an expansion device through the overlapping portions of the tubular member and the preexisting tubular member.

376. The method of claim 375, wherein the expansion device is adjustable.

377. The method of claim 376, wherein the expansion device is adjustable to a plurality of sizes.

378. The method of claim 375, wherein the expansion device comprises a plurality of adjustable expansion devices.

379. The method of claim 378, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

380. The method of claim 375, wherein pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:

gripping the tubular member; and

pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member.

381. The method of claim 380, wherein gripping the tubular member comprises:  
permitting axial displacement of the tubular member in a first direction; and  
not permitting axial displacement of the tubular member in a second direction.
382. The method of claim 380, wherein pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:  
pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using an actuator.
383. The method of claim 375, wherein pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:  
pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using fluid pressure.
384. The method of claim 383, wherein pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using fluid pressure comprises:  
pressurizing an annulus within the tubular member above the expansion device.
385. The method of claim 375, further comprising:  
cutting an end of the portion of the tubular member that overlaps with the preexisting tubular member.
386. The method of claim 385, further comprising:  
removing the cut off end of the expandable tubular member from the preexisting structure.
387. The method of claim 338, further comprising:  
injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and the preexisting structure.
388. The method of claim 338, further comprising:  
cutting off an end of the expandable tubular member.

389. The method of claim 388, further comprising:  
removing the cut off end of the expandable tubular member from the preexisting structure.
390. A method of radially expanding and plastically deforming a tubular member, comprising:  
applying internal pressure to the inside surface of the tubular member at a plurality of discrete location separated from one another.
391. A system for radially expanding and plastically deforming an expandable tubular member within a borehole having a preexisting wellbore casing, comprising:  
means for positioning the tubular member within the borehole in overlapping relation to the wellbore casing;  
means for radially expanding and plastically deforming a portion of the tubular member to form a bell section; and  
means for radially expanding and plastically deforming a portion of the tubular member above the bell section comprising a portion of the tubular member that overlaps with the wellbore casing;  
wherein the inside diameter of the bell section is greater than the inside diameter of the radially expanded and plastically deformed portion of the tubular member above the bell section.
392. The system of claim 391, wherein means for radially expanding and plastically deforming a portion of the tubular member to form a bell section comprises:  
means for positioning an adjustable expansion device within the expandable tubular member;  
means for supporting the expandable tubular member and the adjustable expansion device within the borehole;  
means for lowering the adjustable expansion device out of the expandable tubular member;  
means for increasing the outside dimension of the adjustable expansion device; and  
means for displacing the adjustable expansion device upwardly relative to the expandable tubular member n times to radially expand and plastically deform n portions of the expandable tubular member, wherein n is greater than or equal to 1.
393. A system for forming a mono diameter wellbore casing, comprising:

means for positioning an adjustable expansion device within a first expandable tubular member;

means for supporting the first expandable tubular member and the adjustable expansion device within a borehole;

means for lowering the adjustable expansion device out of the first expandable tubular member;

means for increasing the outside dimension of the adjustable expansion device;

means for displacing the adjustable expansion device upwardly relative to the first expandable tubular member  $m$  times to radially expand and plastically deform  $m$  portions of the first expandable tubular member within the borehole;

means for positioning the adjustable expansion device within a second expandable tubular member;

means for supporting the second expandable tubular member and the adjustable expansion device within the borehole in overlapping relation to the first expandable tubular member;

means for lowering the adjustable expansion device out of the second expandable tubular member;

means for increasing the outside dimension of the adjustable expansion device; and

means for displacing the adjustable expansion device upwardly relative to the second expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the second expandable tubular member within the borehole.

394. A system for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

means for positioning an adjustable expansion device within the expandable tubular member;

means for supporting the expandable tubular member and the adjustable expansion device within the borehole;

means for lowering the adjustable expansion device out of the expandable tubular member;

means for increasing the outside dimension of the adjustable expansion device;

means for displacing the adjustable expansion mandrel upwardly relative to the expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the expandable tubular member within the borehole; and

means for pressurizing an interior region of the expandable tubular member above the adjustable expansion device during the radial expansion and plastic deformation of the expandable tubular member within the borehole.

395. A system for forming a mono diameter wellbore casing, comprising:
- means for positioning an adjustable expansion device within a first expandable tubular member;
  - means for supporting the first expandable tubular member and the adjustable expansion device within a borehole;
  - means for lowering the adjustable expansion device out of the first expandable tubular member;
  - means for increasing the outside dimension of the adjustable expansion device;
  - means for displacing the adjustable expansion device upwardly relative to the first expandable tubular member  $m$  times to radially expand and plastically deform  $m$  portions of the first expandable tubular member within the borehole;
  - means for pressurizing an interior region of the first expandable tubular member above the adjustable expansion device during the radial expansion and plastic deformation of the first expandable tubular member within the borehole;
  - means for positioning the adjustable expansion mandrel within a second expandable tubular member;
  - means for supporting the second expandable tubular member and the adjustable expansion mandrel within the borehole in overlapping relation to the first expandable tubular member;
  - means for lowering the adjustable expansion mandrel out of the second expandable tubular member;
  - means for increasing the outside dimension of the adjustable expansion mandrel;
  - means for displacing the adjustable expansion mandrel upwardly relative to the second expandable tubular member  $n$  times to radially expand and plastically deform  $n$  portions of the second expandable tubular member within the borehole; and
  - means for pressurizing an interior region of the second expandable tubular member above the adjustable expansion mandrel during the radial expansion and plastic deformation of the second expandable tubular member within the borehole.
396. A system for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:
- means for positioning first and second adjustable expansion devices within the expandable tubular member;

means for supporting the expandable tubular member and the first and second adjustable expansion devices within the borehole;

means for lowering the first adjustable expansion device out of the expandable tubular member;

means for increasing the outside dimension of the first adjustable expansion device;

means for displacing the first adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform a lower portion of the expandable tubular member;

means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the expandable tubular member;

means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;

means for displacing the second adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform portions of the expandable tubular member above the lower portion of the expandable tubular member;

wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

397. A system for forming a mono diameter wellbore casing, comprising:

means for positioning first and second adjustable expansion devices within a first expandable tubular member;

means for supporting the first expandable tubular member and the first and second adjustable expansion devices within a borehole;

means for lowering the first adjustable expansion device out of the first expandable tubular member;

means for increasing the outside dimension of the first adjustable expansion device;

displacing the first adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform a lower portion of the first expandable tubular member;

means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the first expandable tubular member;

means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;

means for displacing the second adjustable expansion device upwardly relative to the

- first expandable tubular member to radially expand and plastically deform portions of the first expandable tubular member above the lower portion of the expandable tubular member;
- means for positioning first and second adjustable expansion devices within a second expandable tubular member;
- means for supporting the first expandable tubular member and the first and second adjustable expansion devices within the borehole in overlapping relation to the first expandable tubular member;
- means for lowering the first adjustable expansion device out of the second expandable tubular member;
- means for increasing the outside dimension of the first adjustable expansion device; displacing the first adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform a lower portion of the second expandable tubular member;
- means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the second expandable tubular member;
- means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device; and
- means for displacing the second adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform portions of the second expandable tubular member above the lower portion of the second expandable tubular member;
- wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

398. A system for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

- means for positioning first and second adjustable expansion devices within the expandable tubular member;
- means for supporting the expandable tubular member and the first and second adjustable expansion devices within the borehole;
- means for lowering the first adjustable expansion device out of the expandable tubular member;
- means for increasing the outside dimension of the first adjustable expansion device;
- means for displacing the first adjustable expansion device upwardly relative to the

expandable tubular member to radially expand and plastically deform a lower portion of the expandable tubular member;

means for pressurizing an interior region of the expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the expandable tubular member by the first adjustable expansion device;

means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the expandable tubular member;

means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;

means for displacing the second adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform portions of the expandable tubular member above the lower portion of the expandable tubular member; and

means for pressurizing an interior region of the expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the expandable tubular member above the lower portion of the expandable tubular member by the second adjustable expansion device;

wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

399. A system for forming a mono diameter wellbore casing, comprising:
- means for positioning first and second adjustable expansion devices within a first expandable tubular member;
- means for supporting the first expandable tubular member and the first and second adjustable expansion devices within a borehole;
- means for lowering the first adjustable expansion device out of the first expandable tubular member;
- means for increasing the outside dimension of the first adjustable expansion device; displacing the first adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform a lower portion of the first expandable tubular member;
- means for pressurizing an interior region of the first expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the first expandable tubular member by the first adjustable expansion device;

means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the first expandable tubular member;

means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;

means for displacing the second adjustable expansion device upwardly relative to the first expandable tubular member to radially expand and plastically deform portions of the first expandable tubular member above the lower portion of the expandable tubular member;

means for pressurizing an interior region of the first expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the first expandable tubular member above the lower portion of the first expandable tubular member by the second adjustable expansion device;

means for positioning first and second adjustable expansion devices within a second expandable tubular member;

means for supporting the first expandable tubular member and the first and second adjustable expansion devices within the borehole in overlapping relation to the first expandable tubular member;

means for lowering the first adjustable expansion device out of the second expandable tubular member;

means for increasing the outside dimension of the first adjustable expansion device;

means for displacing the first adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform a lower portion of the second expandable tubular member;

means for pressurizing an interior region of the second expandable tubular member above the first adjustable expansion device during the radial expansion of the lower portion of the second expandable tubular member by the first adjustable expansion device;

means for displacing the first adjustable expansion device and the second adjustable expansion device downwardly relative to the second expandable tubular member;

means for decreasing the outside dimension of the first adjustable expansion device and increasing the outside dimension of the second adjustable expansion device;

means for displacing the second adjustable expansion device upwardly relative to the second expandable tubular member to radially expand and plastically deform

portions of the second expandable tubular member above the lower portion of the second expandable tubular member; and

means for pressurizing an interior region of the second expandable tubular member above the second adjustable expansion device during the radial expansion of the portions of the second expandable tubular member above the lower portion of the second expandable tubular member by the second adjustable expansion device;

wherein the outside dimension of the first adjustable expansion device is greater than the outside dimension of the second adjustable expansion device.

400. A system for radially expanding and plastically deforming an expandable tubular member within a borehole, comprising:

means for supporting the expandable tubular member, an hydraulic actuator, and an adjustable expansion device within the borehole;

means for increasing the size of the adjustable expansion device; and

means for displacing the adjustable expansion device upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform a portion of the expandable tubular member.

401. The system of claim 400, further comprising:

means for reducing the size of the adjustable expansion device after the portion of the expandable tubular member has been radially expanded and plastically deformed.

402. The system of claim 401, further comprising:

means for fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member after reducing the size of the adjustable expansion device.

403. The system of claim 402, further comprising:

means for permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator after fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member.

404. The system of claim 403, further comprising:

means for injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and a preexisting structure after permitting the

position of the expandable tubular member to float relative to the position of the hydraulic actuator.

405. The system of claim 403, further comprising:  
means for increasing the size of the adjustable expansion device after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
406. The system of claim 405, further comprising:  
means for displacing the adjustable expansion cone upwardly relative to the expandable tubular member to radially expand and plastically deform another portion of the expandable tubular member.
407. The system of claim 406, further comprising:  
if the end of the other portion of the expandable tubular member overlaps with a preexisting structure, then  
means for not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator; and  
means for displacing the adjustable expansion cone upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform the end of the other portion of the expandable tubular member that overlaps with the preexisting structure.
408. A system for forming a mono diameter wellbore casing within a borehole that includes a preexisting wellbore casing, comprising:  
means for supporting the expandable tubular member, an hydraulic actuator, and an adjustable expansion device within the borehole;  
means for increasing the size of the adjustable expansion device;  
means for displacing the adjustable expansion device upwardly relative to the expandable tubular member using the hydraulic actuator to radially expand and plastically deform a portion of the expandable tubular member; and  
means for displacing the adjustable expansion device upwardly relative to the expandable tubular member to radially expand and plastically deform the remaining portion of the expandable tubular member and a portion of the preexisting wellbore casing that overlaps with an end of the remaining portion

of the expandable tubular member.

409. The system of claim 408, further comprising:  
means for reducing the size of the adjustable expansion device after the portion of the expandable tubular member has been radially expanded and plastically deformed.
410. The system of claim 409, further comprising:  
means for fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member after reducing the size of the adjustable expansion device.
411. The system of claim 410, further comprising:  
means for permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator after fluidically sealing the radially expanded and plastically deformed end of the expandable tubular member.
412. The system of claim 411, further comprising:  
means for injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and the borehole after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
413. The system of claim 411, further comprising:  
means for increasing the size of the adjustable expansion device after permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.
414. The system of claim 413, further comprising:  
means for displacing the adjustable expansion cone upwardly relative to the expandable tubular member to radially expand and plastically deform the remaining portion of the expandable tubular member.
415. The system of claim 414, further comprising:  
means for not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator; and  
means for displacing the adjustable expansion cone upwardly relative to the

expandable tubular member using the hydraulic actuator to radially expand and plastically deform the end of the remaining portion of the expandable tubular member that overlaps with the preexisting wellbore casing after not permitting the position of the expandable tubular member to float relative to the position of the hydraulic actuator.

416. A system for radially expanding and plastically deforming a tubular member, comprising:

means for positioning the tubular member within a preexisting structure;

means for radially expanding and plastically deforming a lower portion of the tubular member to form a bell section; and

means for radially expanding and plastically deforming a portion of the tubular member above the bell section.

417. The system of claim 416, wherein positioning the tubular member within a preexisting structure comprises:

means for locking the tubular member to an expansion device.

418. The system of claim 417, wherein the outside diameter of the expansion device is less than the inside diameter of the tubular member.

419. The system of claim 417, wherein the expansion device is positioned within the tubular member.

420. The system of claim 417, wherein the expansion device comprises an adjustable expansion device.

421. The system of claim 420, wherein the adjustable expansion device is adjustable to a plurality of sizes.

422. The system of claim 417, wherein the expansion device comprises a plurality of expansion devices.

423. The system of claim 422, wherein at least one of the expansion devices comprises an adjustable expansion device.

424. The system of claim 423, wherein at least one of the adjustable expansion device is

adjustable to a plurality of sizes.

425. The system of claim 416, wherein means for radially expanding and plastically deforming a lower portion of the tubular member to form a bell section comprises:

- means for lowering an expansion device out of an end of the tubular member; and
- means for pulling the expansion device through the end of the tubular member.

426. The system of claim 425, wherein means for lowering an expansion device out of an end of the tubular member comprises:

- means for lowering the expansion device out of the end of the tubular member; and
- means for adjusting the size of the expansion device.

427. The system of claim 426, wherein the adjustable expansion device is adjustable to a plurality of sizes.

428. The system of claim 426, wherein the expansion device comprises a plurality of adjustable expansion devices.

429. The system of claim 428, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

430. The system of claim 425, wherein means for pulling the expansion device through the end of the tubular member comprises:

- means for gripping the tubular member; and
- means for pulling an expansion device through an end of the tubular member.

431. The system of claim 430, wherein means for gripping the tubular member comprises:  
means for permitting axial displacement of the tubular member in a first direction; and  
means for not permitting axial displacement of the tubular member in a second direction.

432. The system of claim 430, wherein means for pulling the expansion device through the end of the tubular member comprises:

- means for pulling the expansion device through the end of the tubular member using an actuator.

433. The system of claim 416, wherein means for radially expanding and plastically

deforming a portion of the tubular member above the bell section comprises:

means for lowering an expansion device out of an end of the tubular member; and

means for pulling the expansion device through the end of the tubular member.

434. The system of claim 433, wherein means for lowering an expansion device out of an end of the tubular member comprises:

means for lowering the expansion device out of the end of the tubular member; and

means for adjusting the size of the expansion device.

435. The system of claim 434, wherein the adjustable expansion device is adjustable to a plurality of sizes.

436. The system of claim 434, wherein the expansion device comprises a plurality of adjustable expansion devices.

437. The system of claim 436, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

438. The system of claim 433, wherein means for pulling the expansion device through the end of the tubular member comprises:

means for gripping the tubular member; and

means for pulling an expansion device through an end of the tubular member.

439. The system of claim 438, wherein means for gripping the tubular member comprises:  
means for permitting axial displacement of the tubular member in a first direction; and  
means for not permitting axial displacement of the tubular member in a second direction.

440. The system of claim 438, wherein means for pulling the expansion device through the end of the tubular member comprises:

means for pulling the expansion device through the end of the tubular member using an actuator.

441. The system of claim 433, wherein means for pulling the expansion device through the end of the tubular member comprises:

means for pulling the expansion device through the end of the tubular member using fluid pressure.

442. The system of claim 441, wherein means for pulling the expansion device through the end of the tubular member using fluid pressure comprises:  
means for pressurizing an annulus within the tubular member above the expansion device.
443. The system of claim 416, wherein means for radially expanding and plastically deforming a portion of the tubular member above the bell section comprises:  
means for fluidly sealing an end of the tubular member; and  
means for pulling the expansion device through the tubular member.
444. The system of claim 443, wherein the expansion device is adjustable.
445. The system of claim 444, wherein the expansion device is adjustable to a plurality of sizes.
446. The system of claim 443, wherein the expansion device comprises a plurality of adjustable expansion devices.
447. The system of claim 446, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.
448. The system of claim 443, wherein means for pulling the expansion device through the end of the tubular member comprises:  
means for gripping the tubular member; and  
means for pulling an expansion device through an end of the tubular member.
449. The system of claim 448, wherein means for gripping the tubular member comprises:  
means for permitting axial displacement of the tubular member in a first direction; and  
means for not permitting axial displacement of the tubular member in a second direction.
450. The system of claim 448, wherein means for pulling the expansion device through the end of the tubular member comprises:  
means for pulling the expansion device through the end of the tubular member using an actuator.

451. The system of claim 443, wherein means for pulling the expansion device through the end of the tubular member comprises:

means for pulling the expansion device through the end of the tubular member using fluid pressure.

452. The system of claim 451, wherein means for pulling the expansion device through the end of the tubular member using fluid pressure comprises:

means for pressurizing an annulus within the tubular member above the expansion device.

453. The system of claim 416, wherein means for radially expanding and plastically deforming a portion of the tubular member above the bell section comprises:

means for overlapping the portion of the tubular member above the bell section with an end of a preexisting tubular member; and

means for pulling an expansion device through the overlapping portions of the tubular member and the preexisting tubular member.

454. The system of claim 453, wherein the expansion device is adjustable.

455. The system of claim 454, wherein the expansion device is adjustable to a plurality of sizes.

456. The system of claim 453, wherein the expansion device comprises a plurality of adjustable expansion devices.

457. The system of claim 456, wherein at least one of the adjustable expansion devices is adjustable to a plurality of sizes.

458. The system of claim 453, wherein means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:

means for gripping the tubular member; and

means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member.

459. The system of claim 458, wherein means for gripping the tubular member comprises:

means for permitting axial displacement of the tubular member in a first direction; and

means for not permitting axial displacement of the tubular member in a second direction.

460. The system of claim 458, wherein means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:

means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using an actuator.

461. The system of claim 453, wherein means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member comprises:

means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using fluid pressure.

462. The system of claim 461, wherein means for pulling the expansion device through the overlapping portions of the tubular member and the preexisting tubular member using fluid pressure comprises:

means for pressurizing an annulus within the tubular member above the expansion device.

463. The system of claim 453, further comprising:

means for cutting an end of the portion of the tubular member that overlaps with the preexisting tubular member.

464. The system of claim 463, further comprising:

means for removing the cut off end of the expandable tubular member from the preexisting structure.

465. The system of claim 416, further comprising:

means for injecting a hardenable fluidic sealing material into an annulus between the expandable tubular member and the preexisting structure.

466. The system of claim 416, further comprising:

means for cutting off an end of the expandable tubular member.

467. The system of claim 466, further comprising:

means for removing the cut off end of the expandable tubular member from the preexisting structure.

468. A system of radially expanding and plastically deforming a tubular member, comprising:

a support member; and

means for applying internal pressure to the inside surface of the tubular member at a plurality of discrete location separated from one another coupled to the support member.

469. A method of cutting a tubular member, comprising:

positioning a plurality of cutting elements within the tubular member; and  
bringing the cutting elements into engagement with the tubular member.

470. The method of claim 469, wherein the cutting elements comprise:

a first group of cutting elements; and

a second group of cutting elements;

wherein the first group of cutting elements are interleaved with the second group of cutting elements.

471. The method of claim 469, wherein bringing the cutting elements into engagement with the tubular member comprises:

bringing the cutting elements into axial alignment.

472. The method of claim 471, wherein bringing the cutting elements into engagement with the tubular member further comprises:

pivoting the cutting elements.

473. The method of claim 471, wherein bringing the cutting elements into engagement with the tubular member further comprises:

translating the cutting elements.

474. The method of claim 471, wherein bringing the cutting elements into engagement with the tubular member further comprises:

pivoting the cutting elements; and

translating the cutting elements.

475. The method of claim 469, wherein bringing the cutting elements into engagement with the tubular member comprises:  
rotating the cutting elements about a common axis.
476. The method of claim 469, wherein bringing the cutting elements into engagement with the tubular member comprises:  
pivoting the cutting elements about corresponding axes;  
translating the cutting elements; and  
rotating the cutting elements about a common axis.
477. The method of claim 469, further comprising:  
preventing the cutting elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value.
478. The method of claim 477, wherein preventing the cutting elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value comprises:  
sensing the inside diameter of the tubular member.
479. A method of gripping a tubular member, comprising:  
positioning a plurality of gripping elements within the tubular member; and  
bringing the gripping elements into engagement with the tubular member.
480. The method of claim 479, wherein bringing the gripping elements into engagement with the tubular member comprises:  
displacing the gripping elements in an axial direction; and  
displacing the gripping elements in a radial direction.
481. The method of claim 479, further comprising:  
biasing the gripping elements against engagement with the tubular member.
482. A method of operating an actuator, comprising:  
pressurizing a plurality of pressure chamber.
483. The method of claim 482, further comprising:  
transmitting torsional loads.

484. A method of injecting a hardenable fluidic sealing material into an annulus between a tubular member and a preexisting structure, comprising:

- positioning the tubular member into the preexisting structure;
- sealing off an end of the tubular member;
- operating a valve within the end of the tubular member; and
- injecting a hardenable fluidic sealing material through the valve into the annulus between the tubular member and the preexisting structure.

485. A system for cutting a tubular member, comprising:

- means for positioning a plurality of cutting elements within the tubular member; and
- means for bringing the cutting elements into engagement with the tubular member.

486. The system of claim 485, wherein the cutting elements comprise:

- a first group of cutting elements; and
- a second group of cutting elements;
- wherein the first group of cutting elements are interleaved with the second group of cutting elements.

487. The system of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member comprises:

- means for bringing the cutting elements into axial alignment.

488. The system of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member further comprises:

- means for pivoting the cutting elements.

489. The system of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member further comprises:

- means for translating the cutting elements.

490. The system of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member further comprises:

- means for pivoting the cutting elements; and
- means for translating the cutting elements.

491. The method of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member comprises:  
means for rotating the cutting elements about a common axis.
492. The system of claim 485, wherein means for bringing the cutting elements into engagement with the tubular member comprises:  
means for pivoting the cutting elements about corresponding axes;  
means for translating the cutting elements; and  
means for rotating the cutting elements about a common axis.
493. The system of claim 485, further comprising:  
means for preventing the cutting elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value.
494. The system of claim 493, wherein means for preventing the cutting elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value comprises:  
means for sensing the inside diameter of the tubular member.
495. A system for gripping a tubular member, comprising:  
means for positioning a plurality of gripping elements within the tubular member; and  
means for bringing the gripping elements into engagement with the tubular member.
496. The system of claim 495, wherein means for bringing the gripping elements into engagement with the tubular member comprises:  
means for displacing the gripping elements in an axial direction; and  
means for displacing the gripping elements in a radial direction.
497. The system of claim 495, further comprising:  
means for biasing the gripping elements against engagement with the tubular member.
498. An actuator system, comprising:  
a support member; and  
means for pressurizing a plurality of pressure chambers coupled to the support member.

499. The system of claim 498, further comprising:  
means for transmitting torsional loads.
500. A system for injecting a hardenable fluidic sealing material into an annulus between a tubular member and a preexisting structure, comprising:  
means for positioning the tubular member into the preexisting structure;  
means for sealing off an end of the tubular member;  
means for operating a valve within the end of the tubular member; and  
means for injecting a hardenable fluidic sealing material through the valve into the annulus between the tubular member and the preexisting structure.
501. A method of engaging a tubular member, comprising:  
positioning a plurality of elements within the tubular member; and  
bringing the elements into engagement with the tubular member.
502. The method of claim 501, wherein the elements comprise:  
a first group of elements; and  
a second group of elements;  
wherein the first group of elements are interleaved with the second group of elements.
503. The method of claim 501, wherein bringing the elements into engagement with the tubular member comprises:  
bringing the elements into axial alignment.
504. The method of claim 501, wherein bringing the elements into engagement with the tubular member further comprises:  
pivoting the elements.
505. The method of claim 501, wherein bringing the elements into engagement with the tubular member further comprises:  
translating the elements.
506. The method of claim 501, wherein bringing the elements into engagement with the tubular member further comprises:  
pivoting the elements; and

translating the elements.

507. The method of claim 501, wherein bringing the elements into engagement with the tubular member comprises:

rotating the elements about a common axis.

508. The method of claim 501, wherein bringing the elements into engagement with the tubular member comprises:

pivoting the elements about corresponding axes;  
translating the elements; and  
rotating the elements about a common axis.

509. The method of claim 501, further comprising:

preventing the elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value.

510. The method of claim 509, wherein preventing the elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value comprises:

sensing the inside diameter of the tubular member.

511. A system for engaging a tubular member, comprising:

means for positioning a plurality of elements within the tubular member; and  
means for bringing the elements into engagement with the tubular member.

512. The system of claim 511, wherein the elements comprise:

a first group of elements; and  
a second group of elements;  
wherein the first group of elements are interleaved with the second group of elements.

513. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member comprises:

means for bringing the elements into axial alignment.

514. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member further comprises:

means for pivoting the elements.

515. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member further comprises:

means for translating the elements.

516. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member further comprises:

means for pivoting the elements; and

means for translating the elements.

517. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member comprises:

means for rotating the elements about a common axis.

518. The system of claim 511, wherein means for bringing the elements into engagement with the tubular member comprises:

means for pivoting the elements about corresponding axes;

means for translating the elements; and

means for rotating the elements about a common axis.

519. The system of claim 511, further comprising:

means for preventing the elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value.

520. The system of claim 519, wherein means for preventing the elements from coming into engagement with the tubular member if the inside diameter of the tubular member is less than a predetermined value comprises:

means for sensing the inside diameter of the tubular member.

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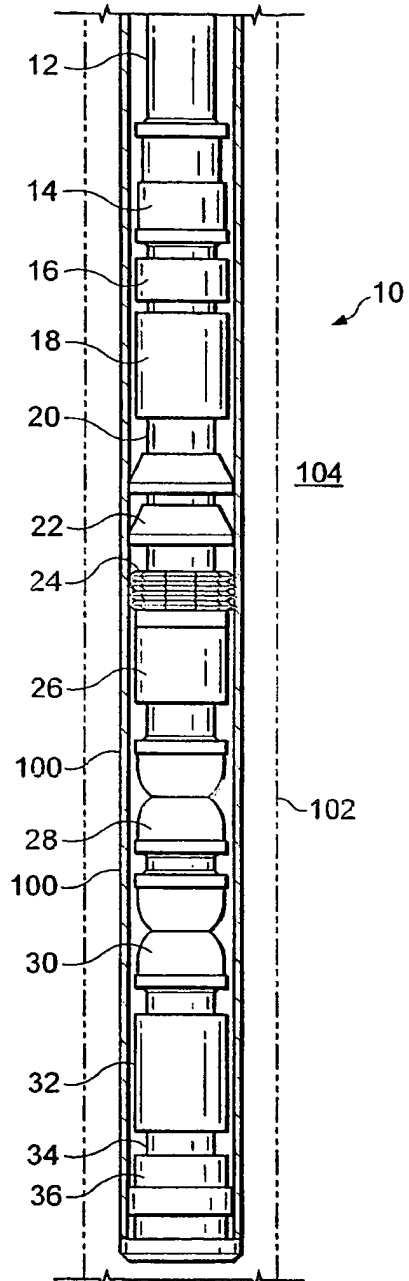


Fig. 1

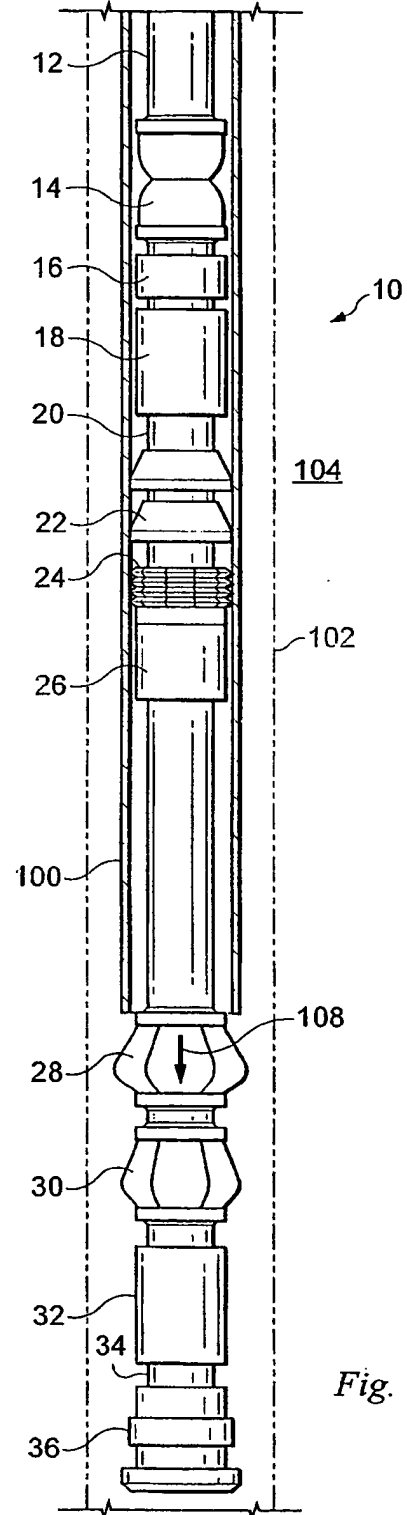
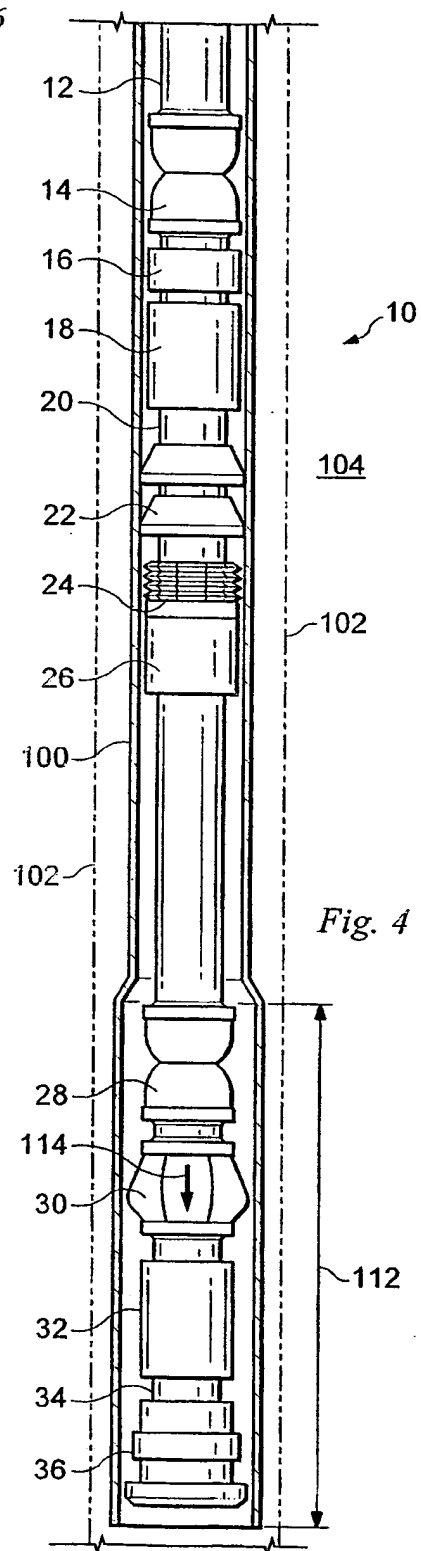
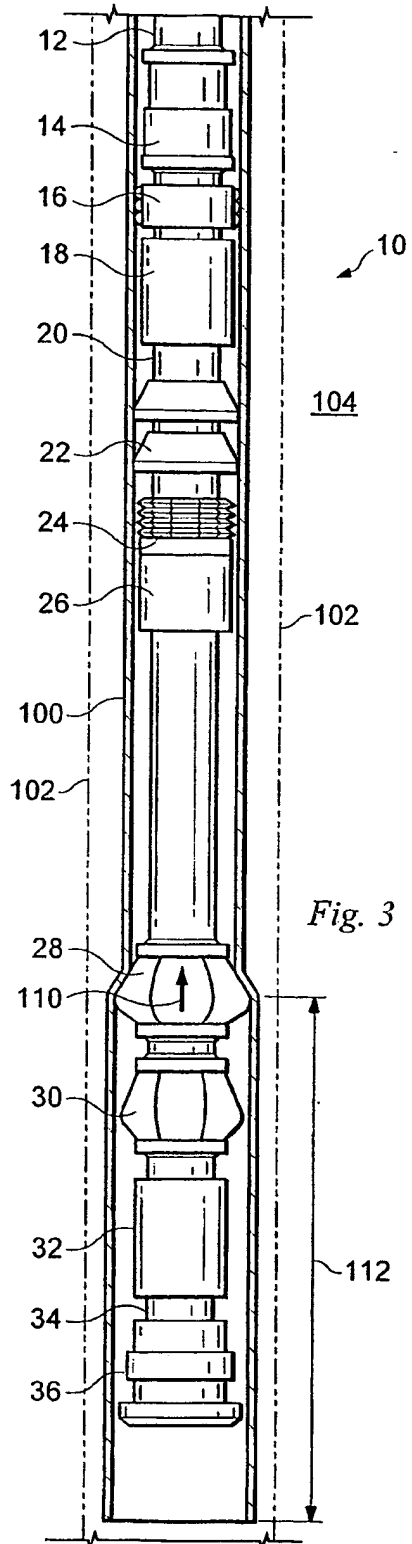


Fig. 2



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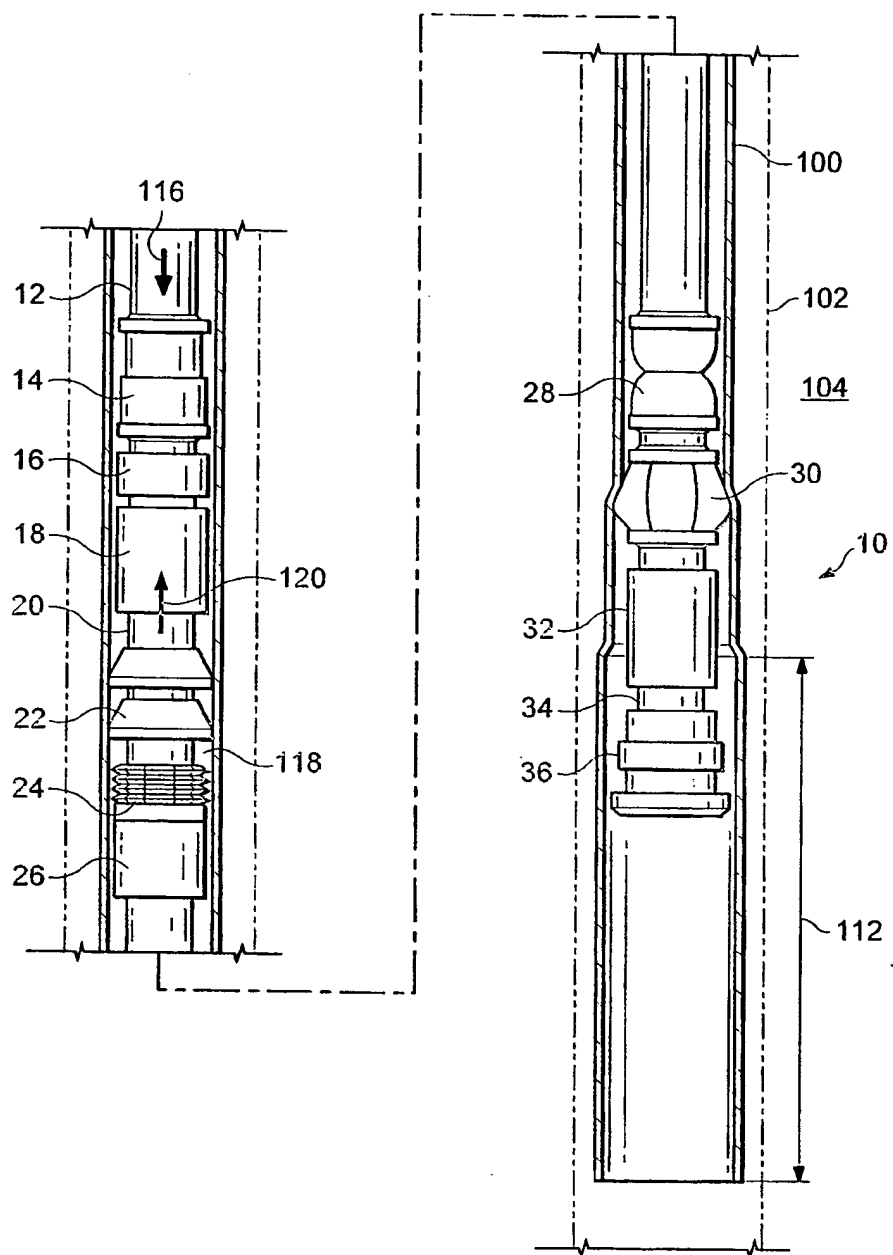


Fig. 5

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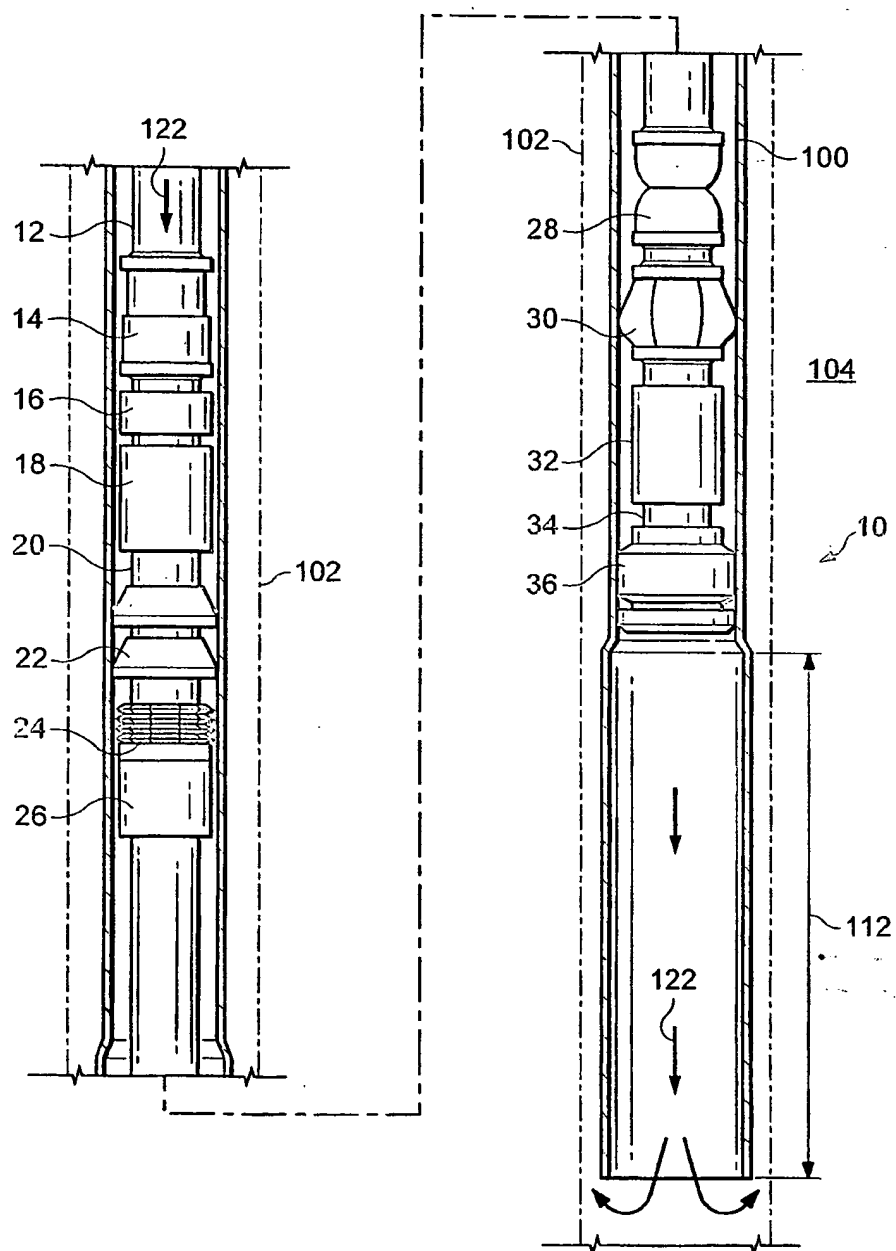


Fig. 6

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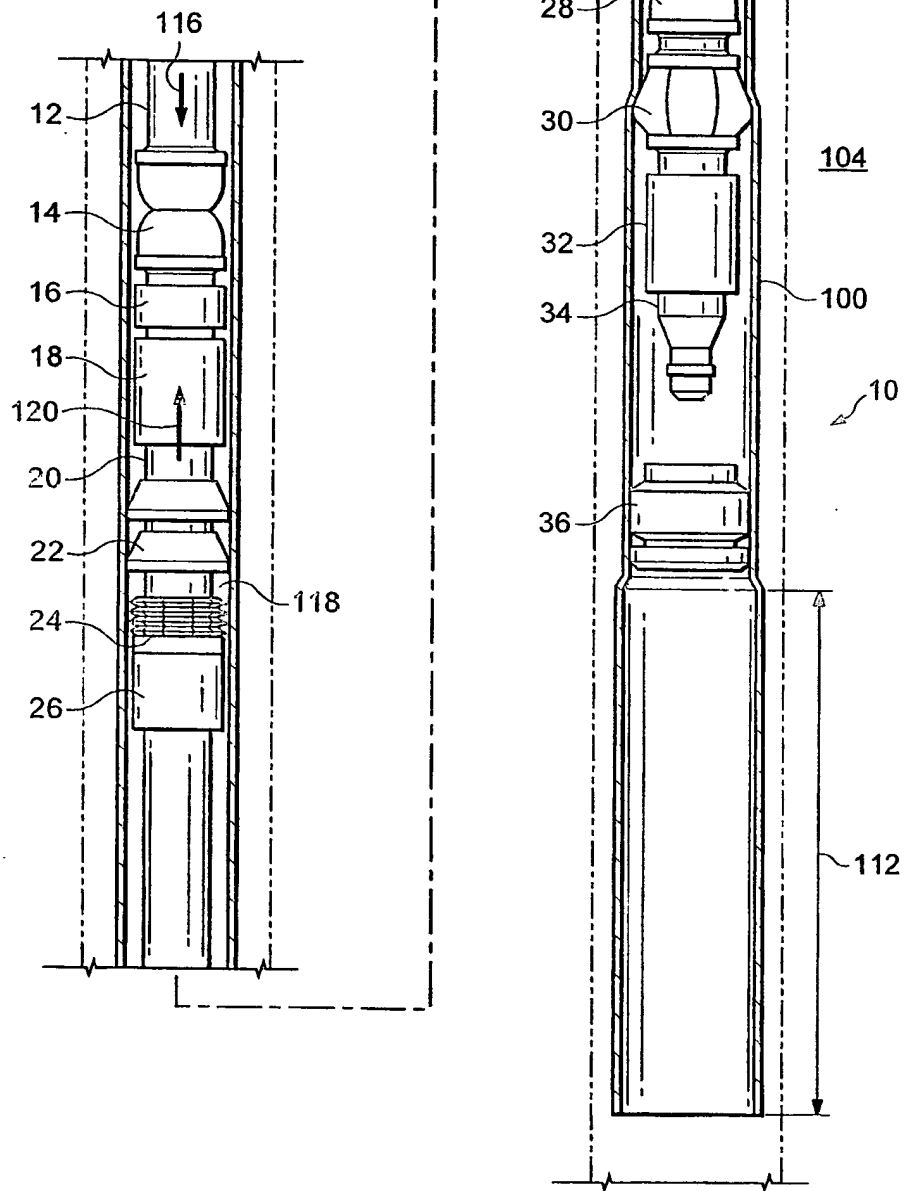


Fig. 7

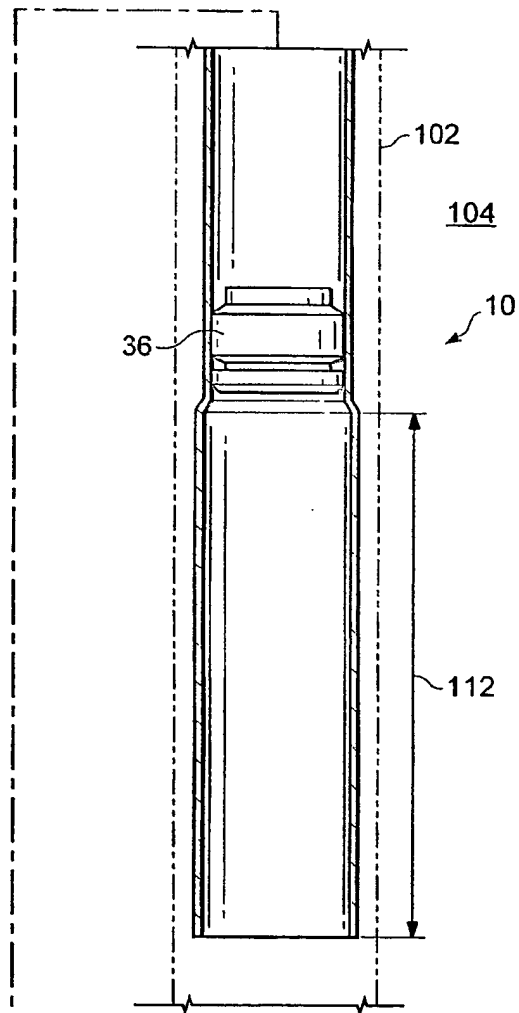
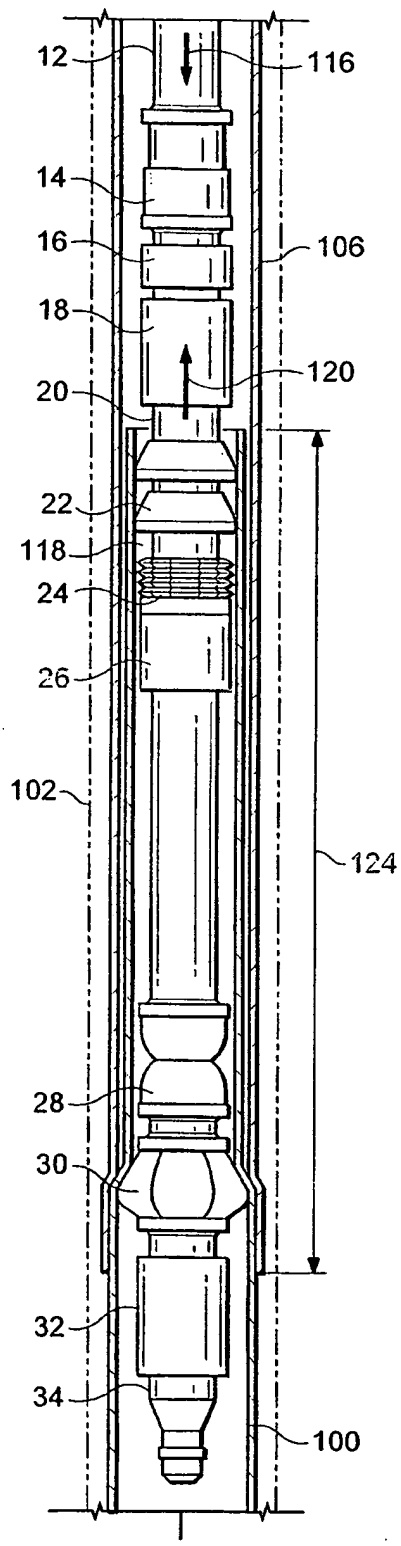
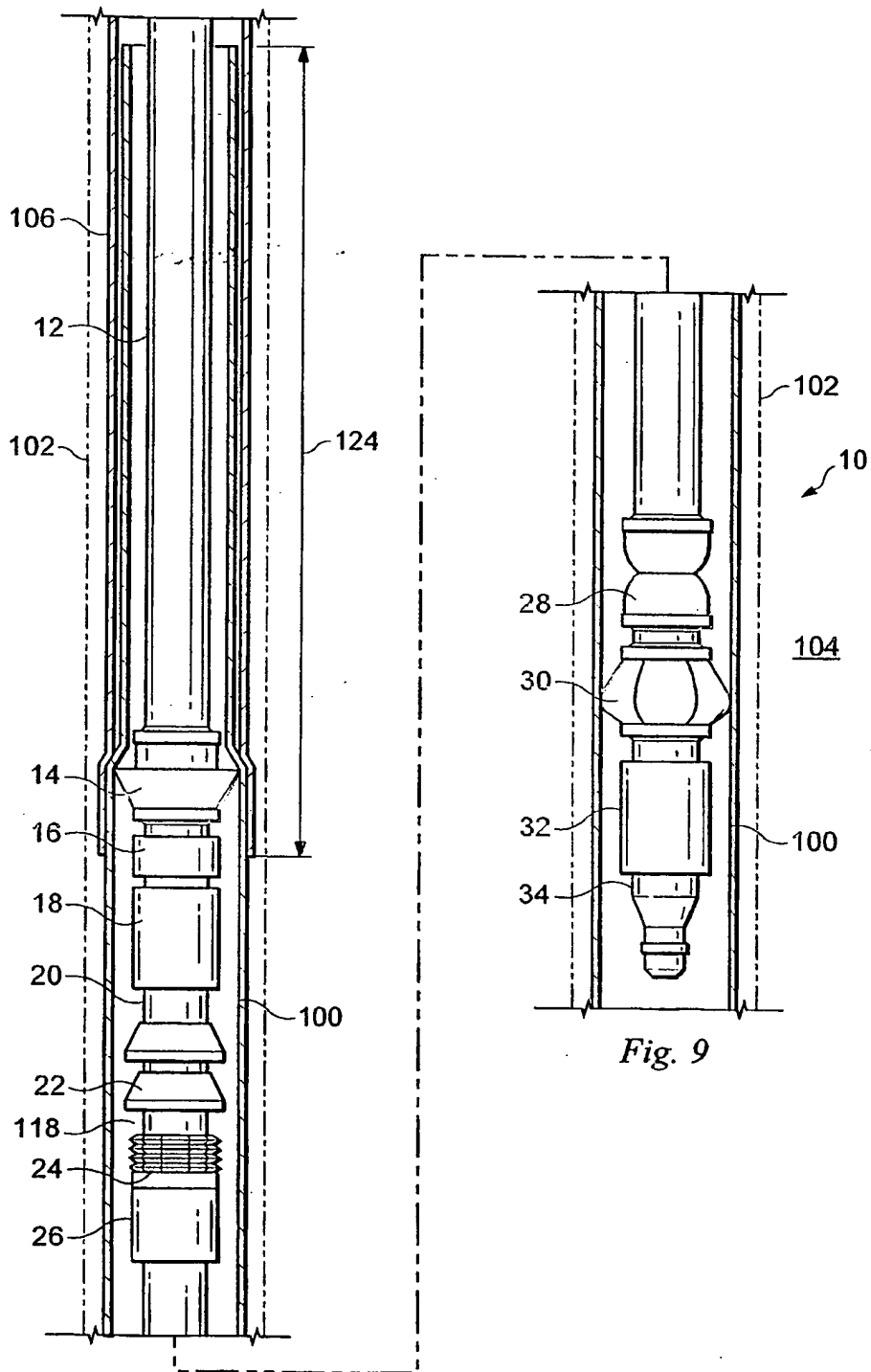


Fig. 8

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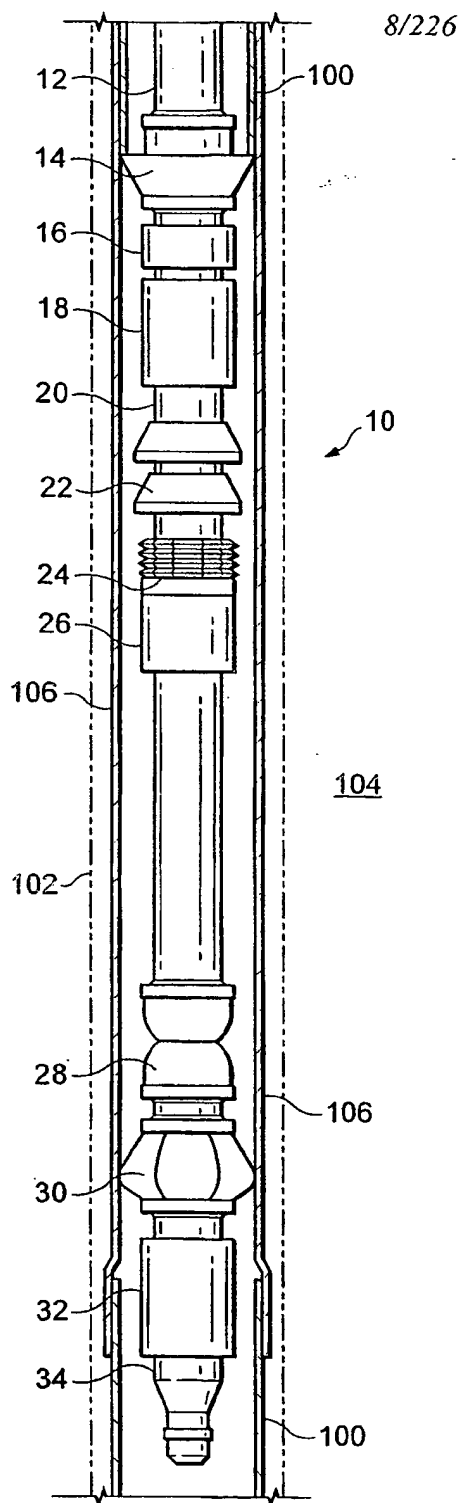
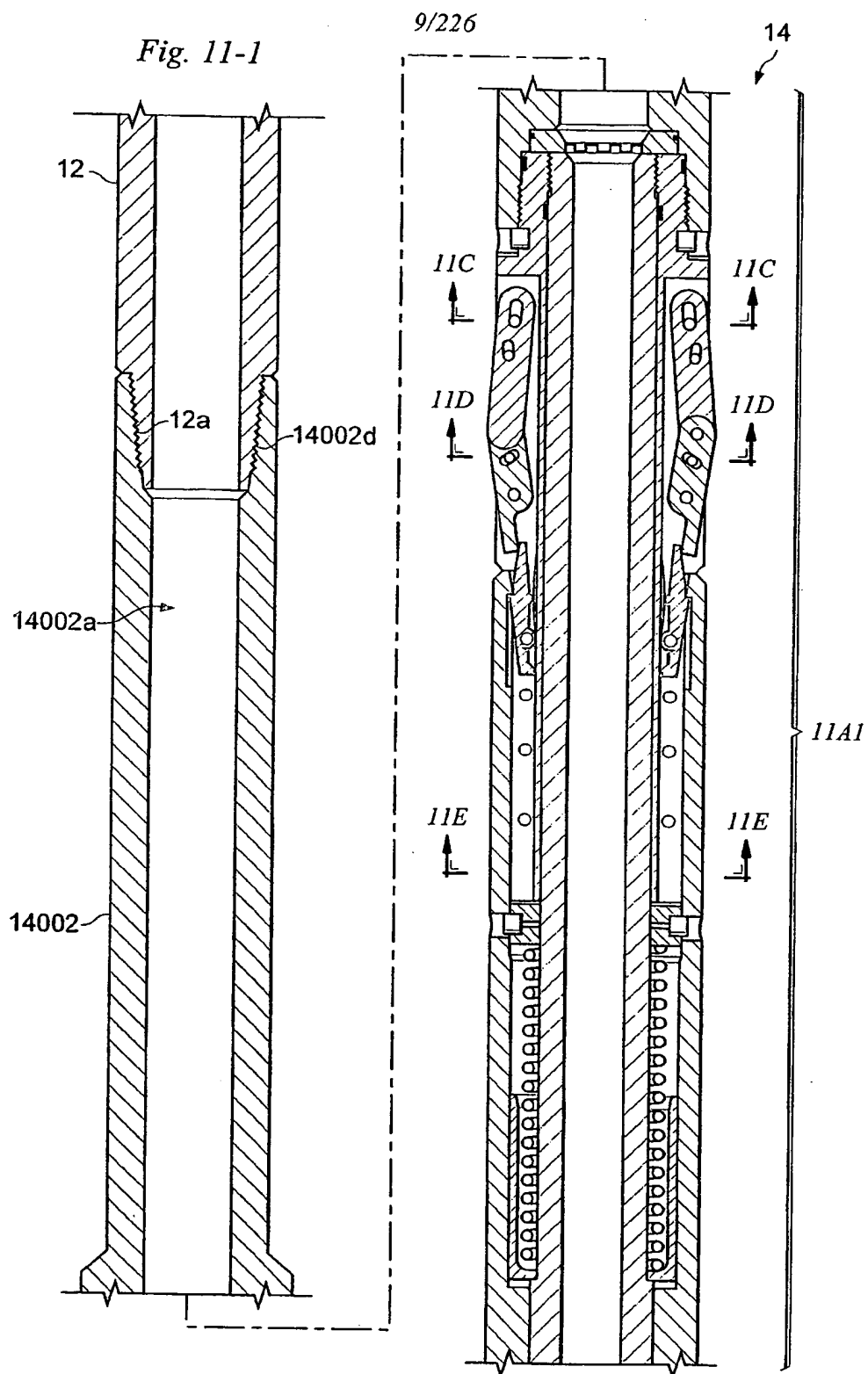


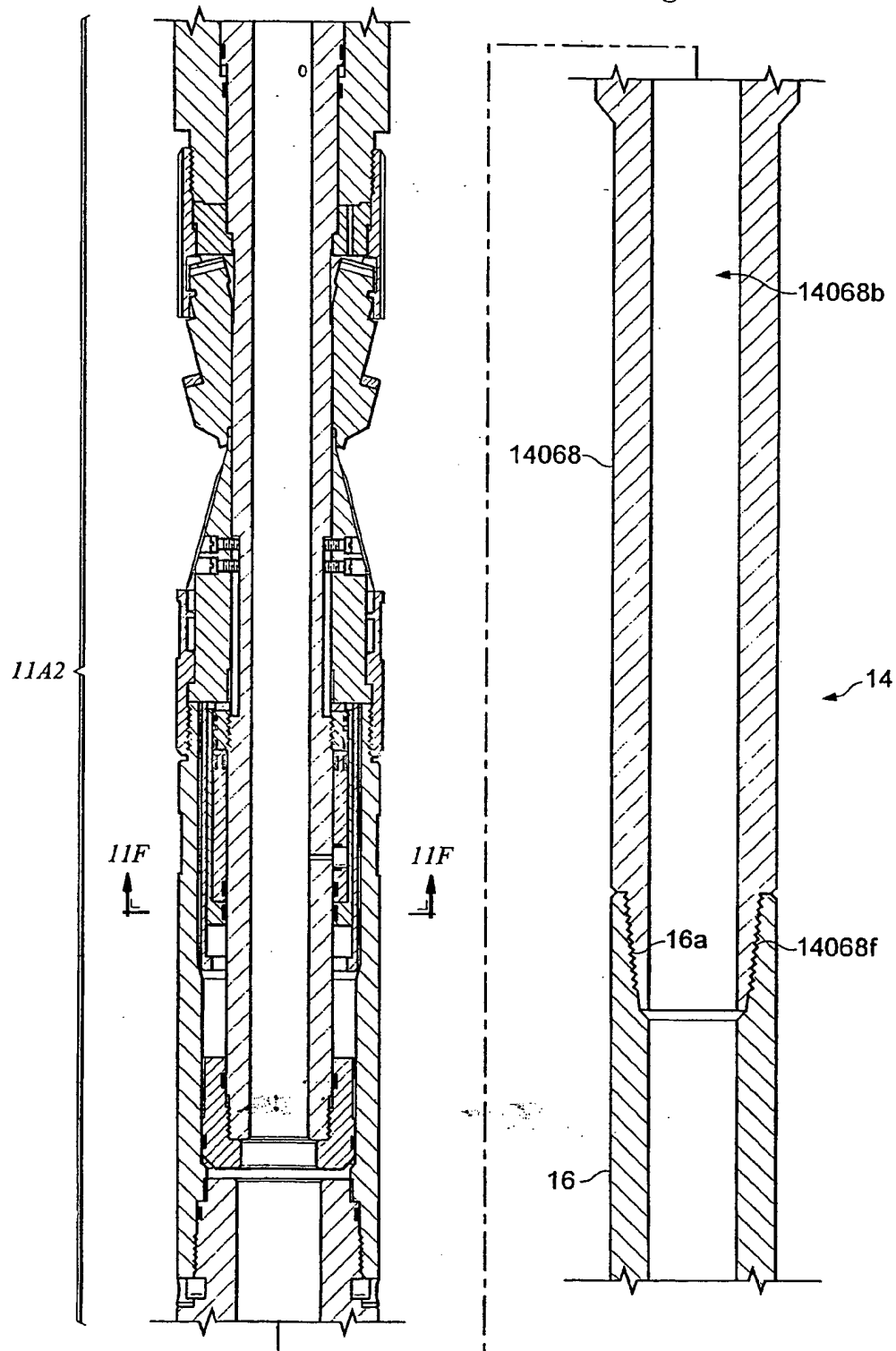
Fig. 10

Fig. 11-1



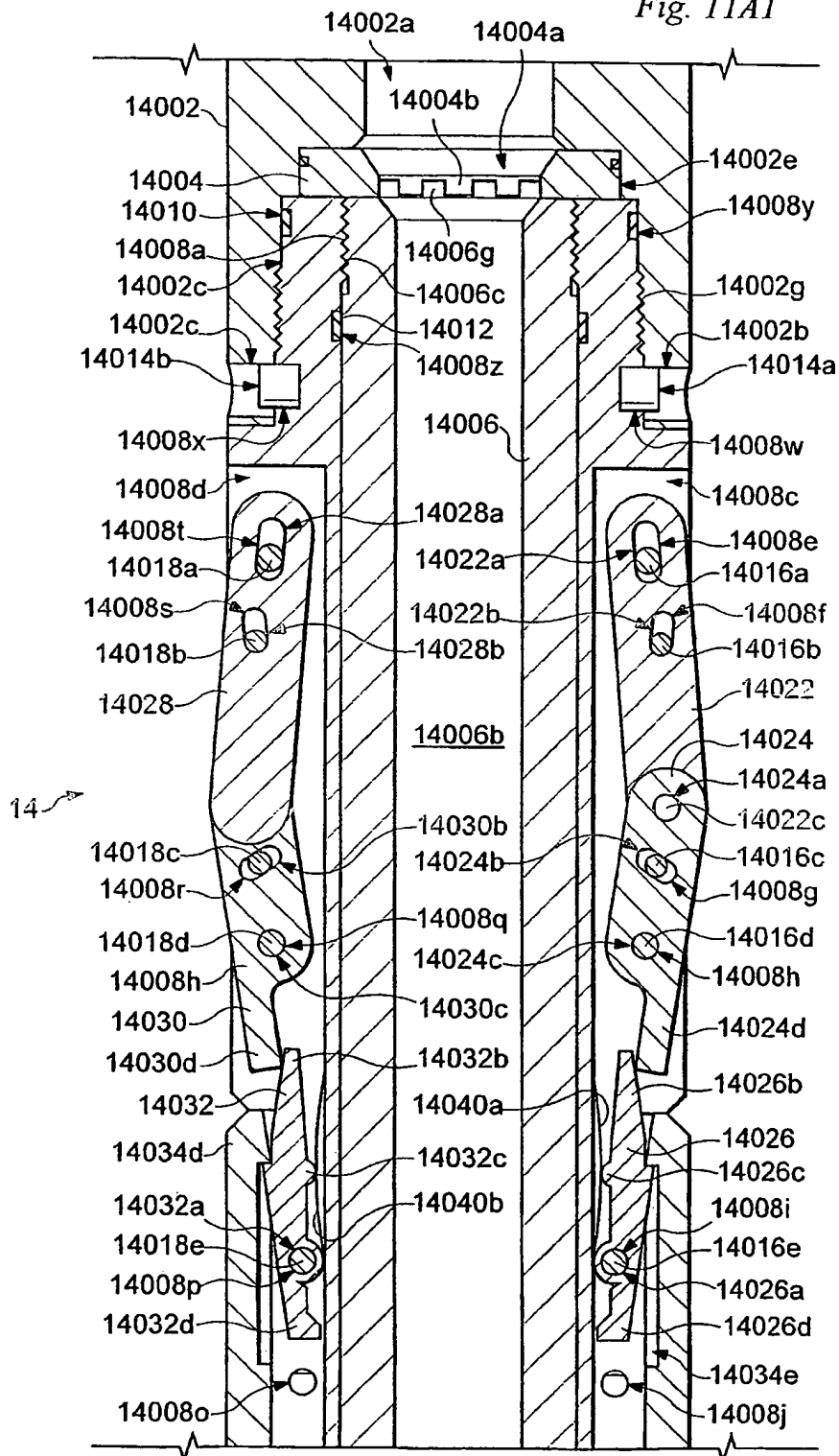
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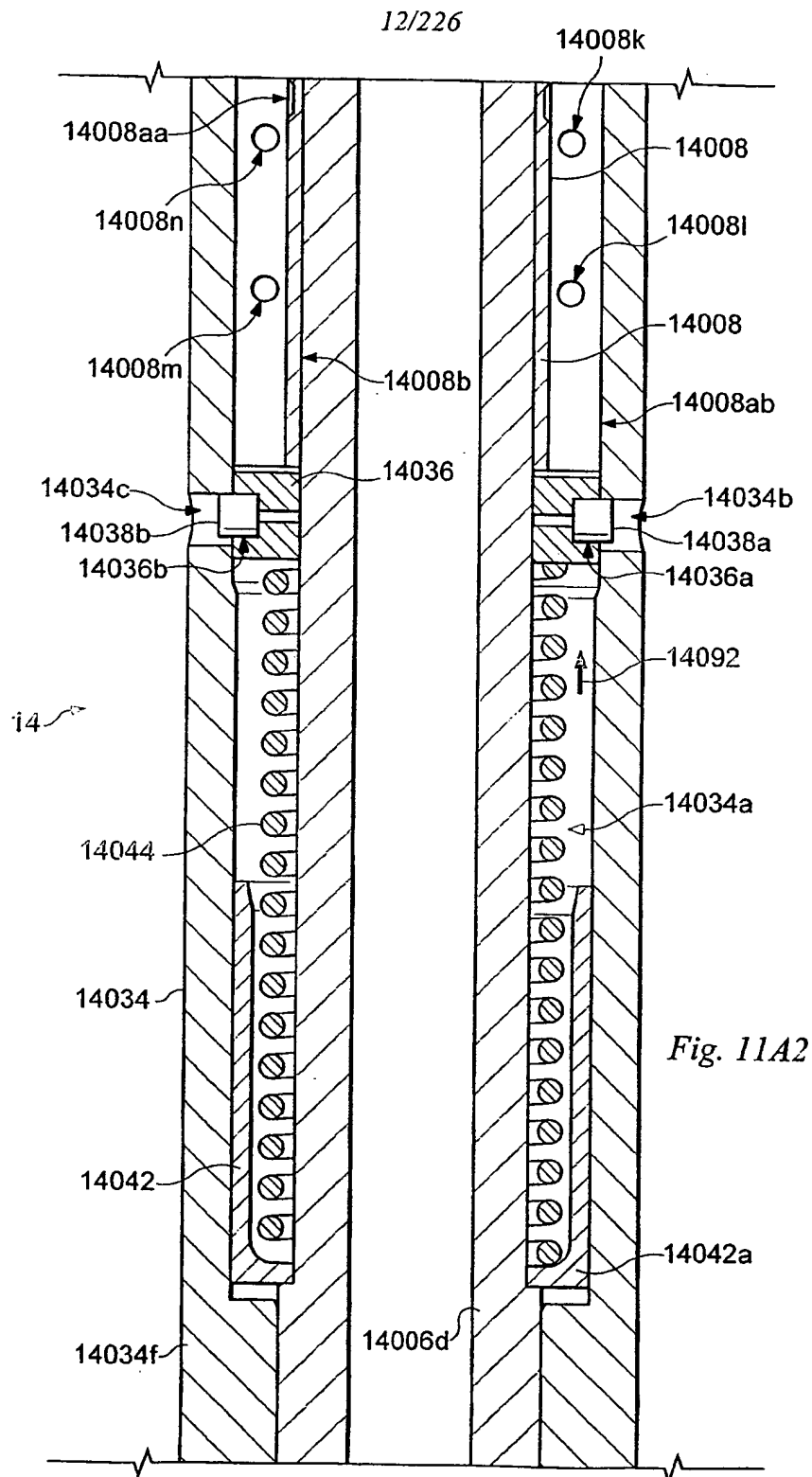
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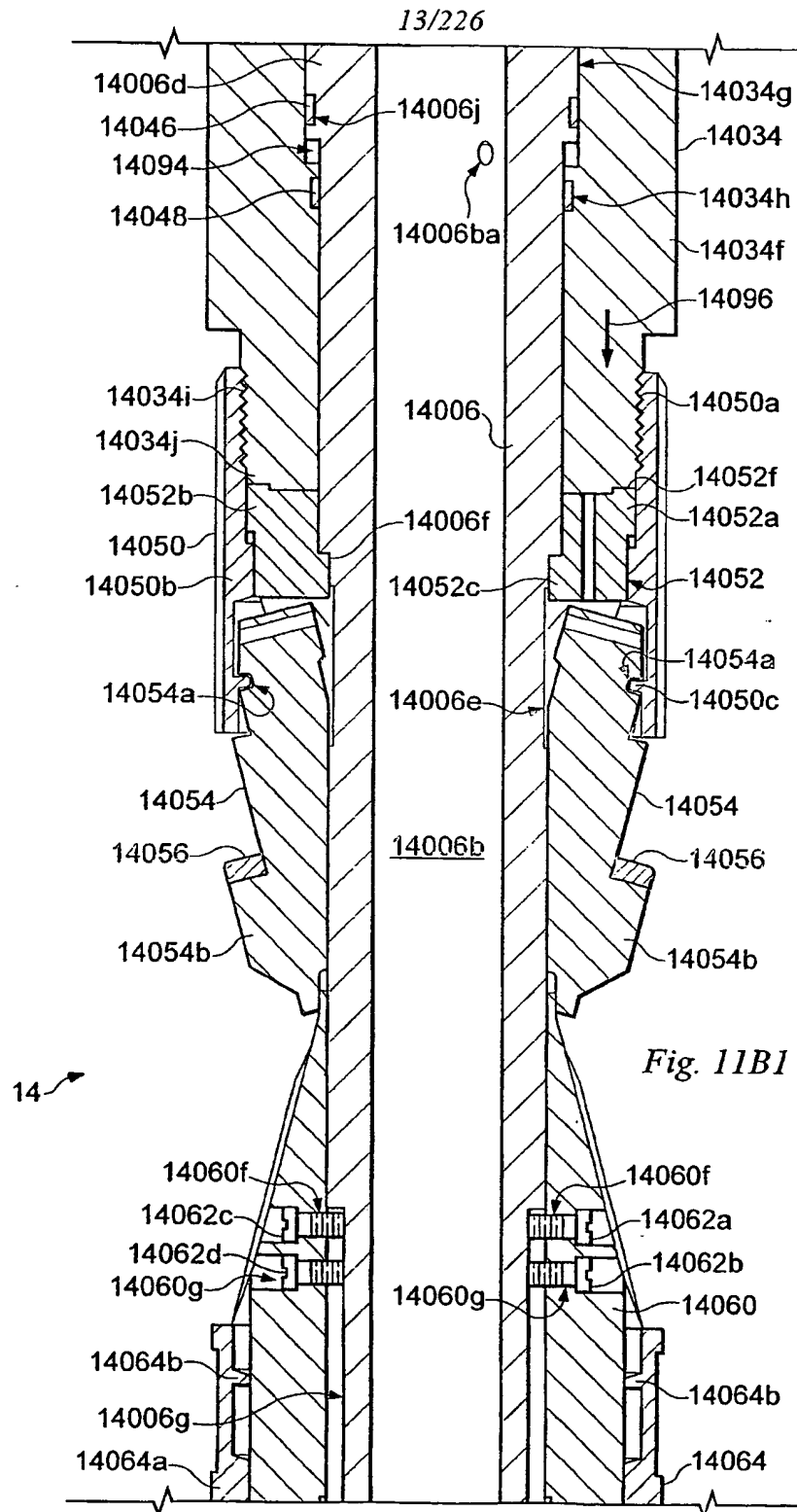


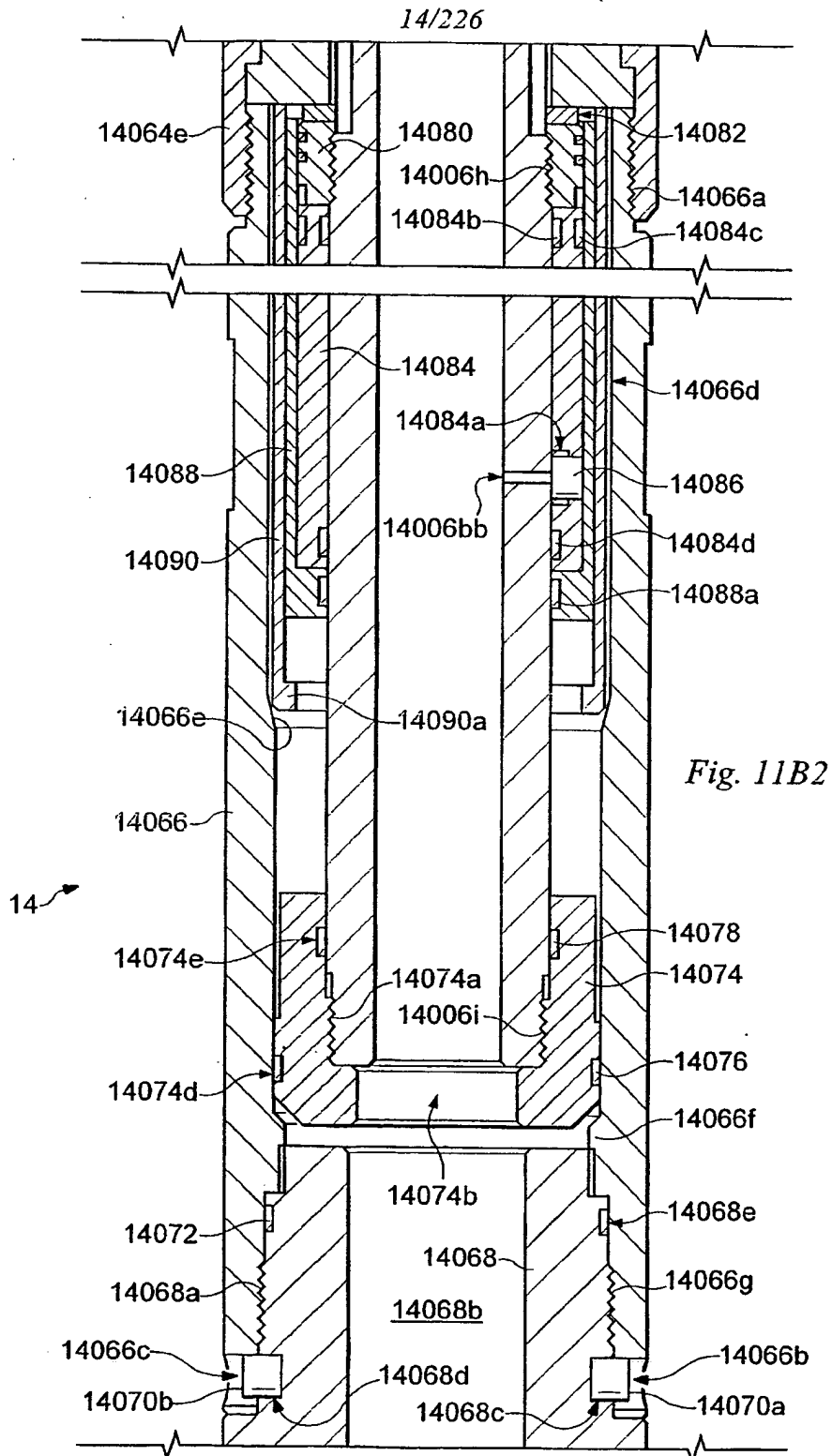
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Fig. 11A1









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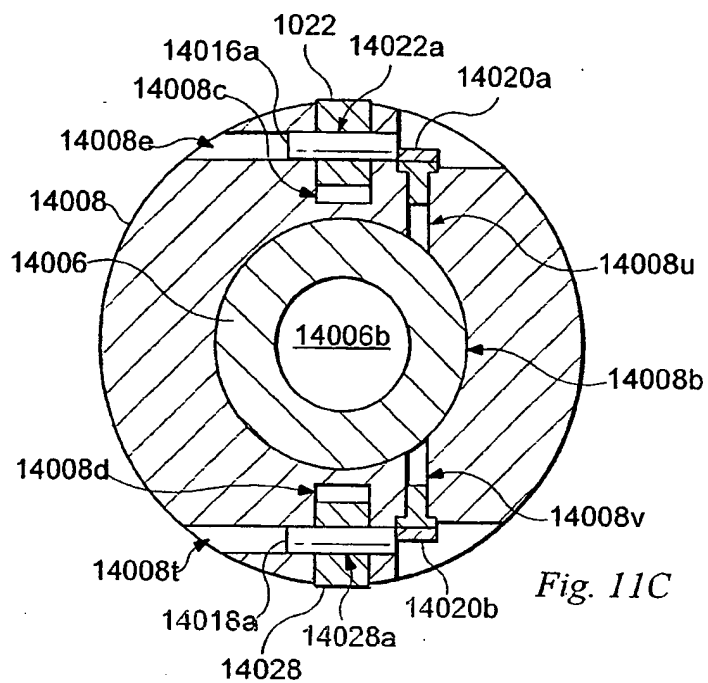
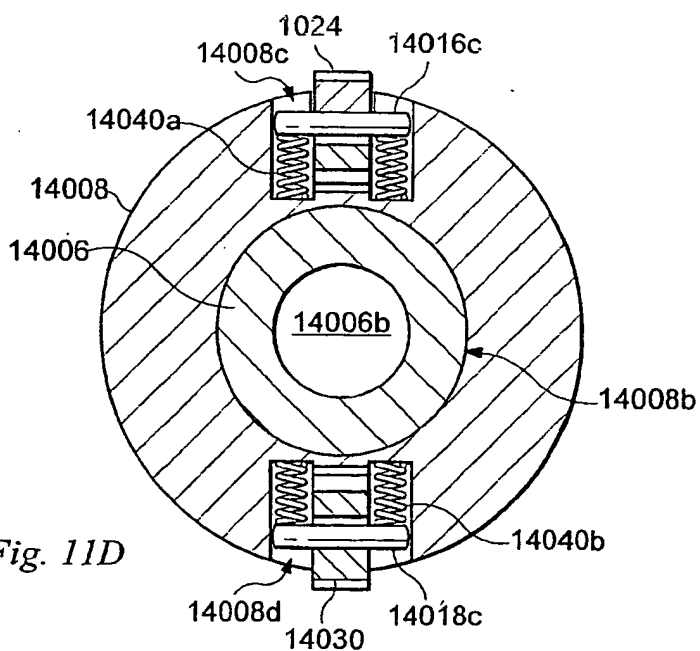


Fig. 11C



*Fig. 11D*

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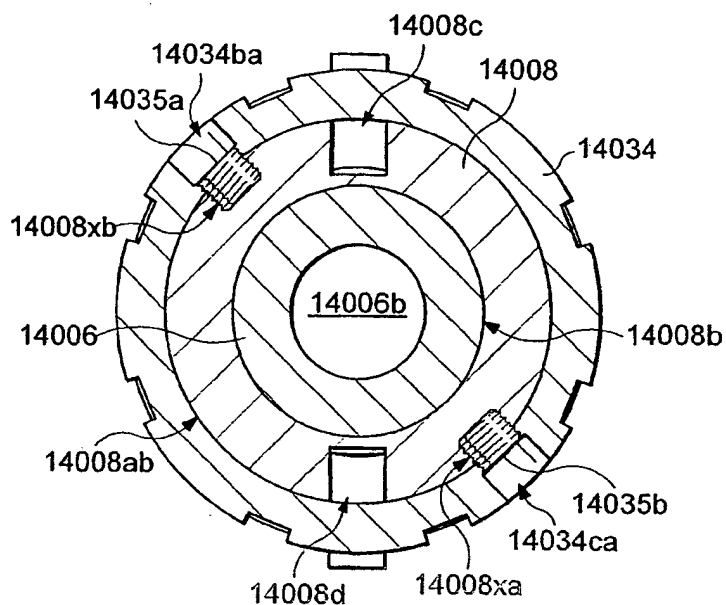


Fig. 11E

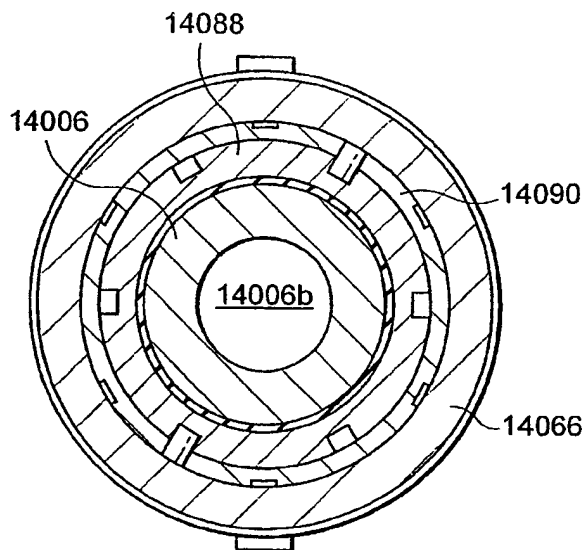


Fig. 11F

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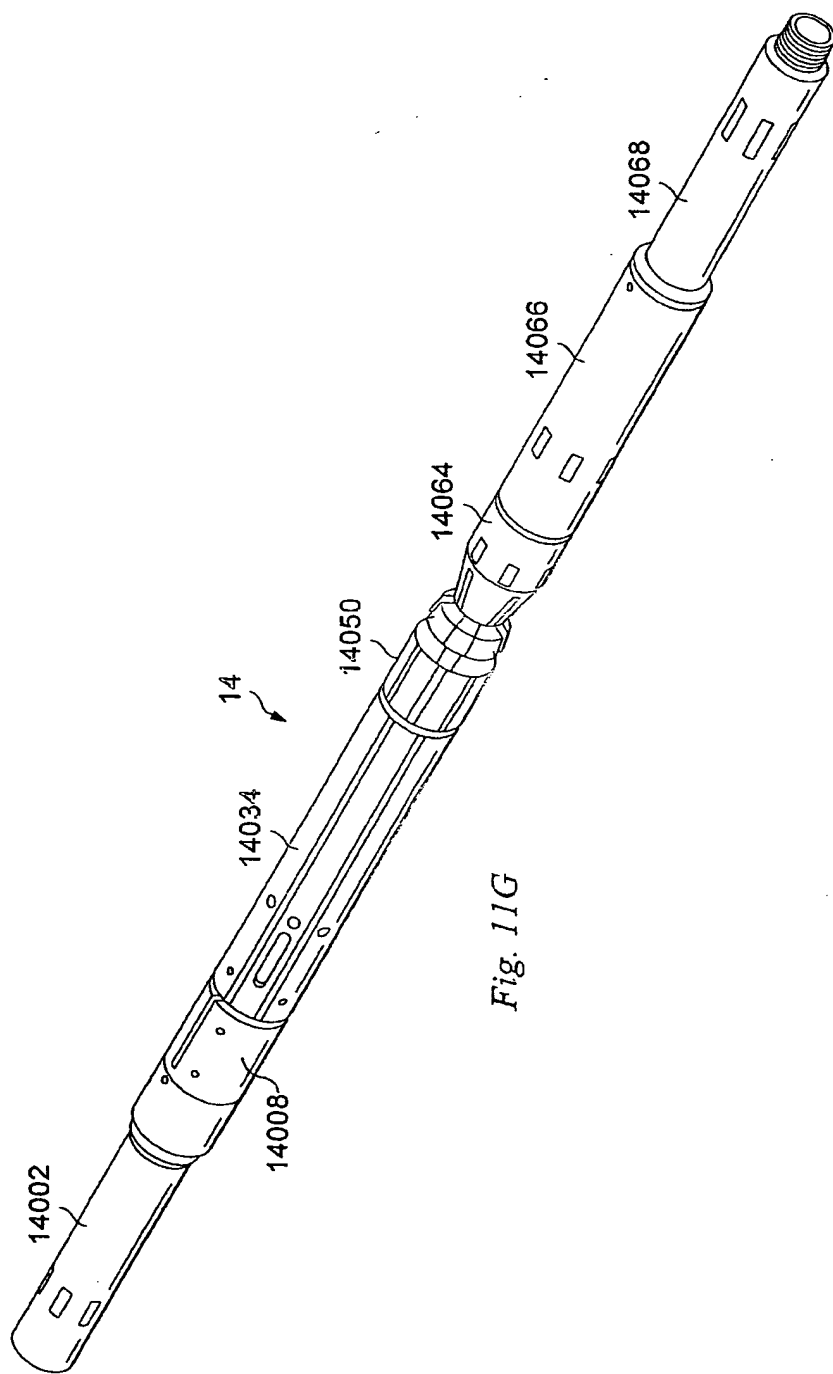


Fig. 11G

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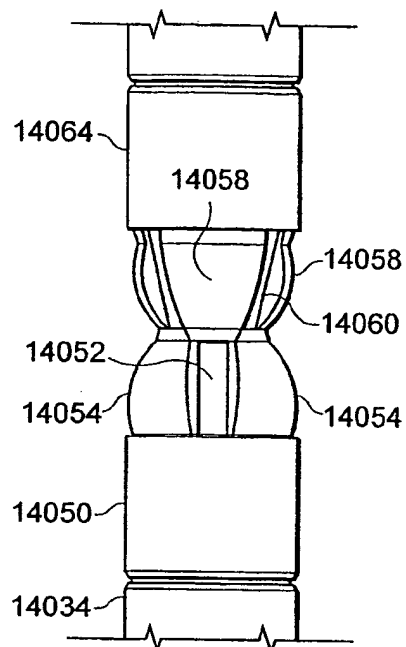


Fig. 11H

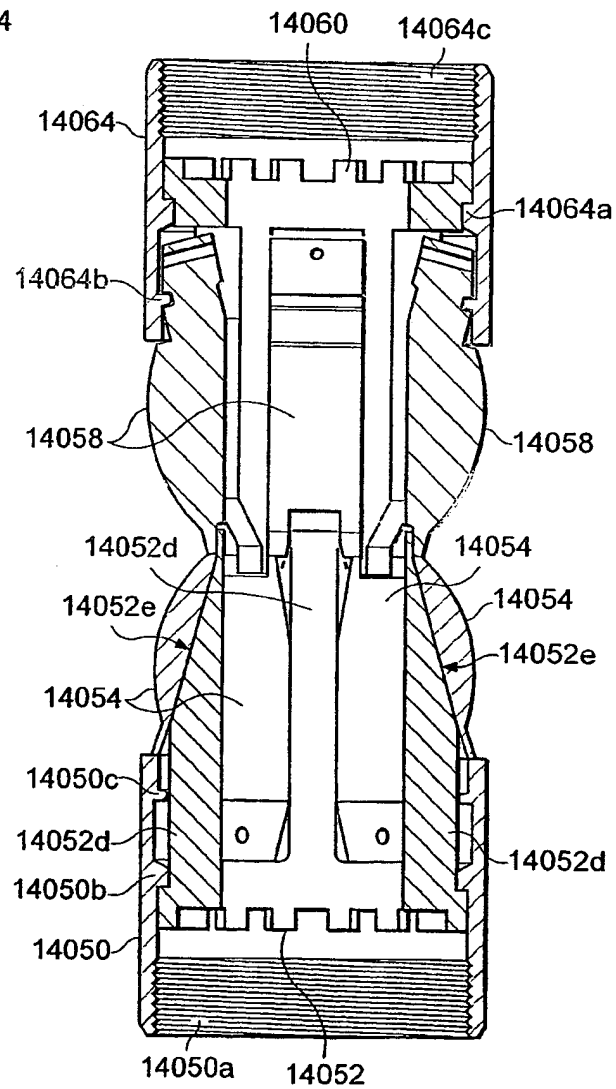


FIG. 11I

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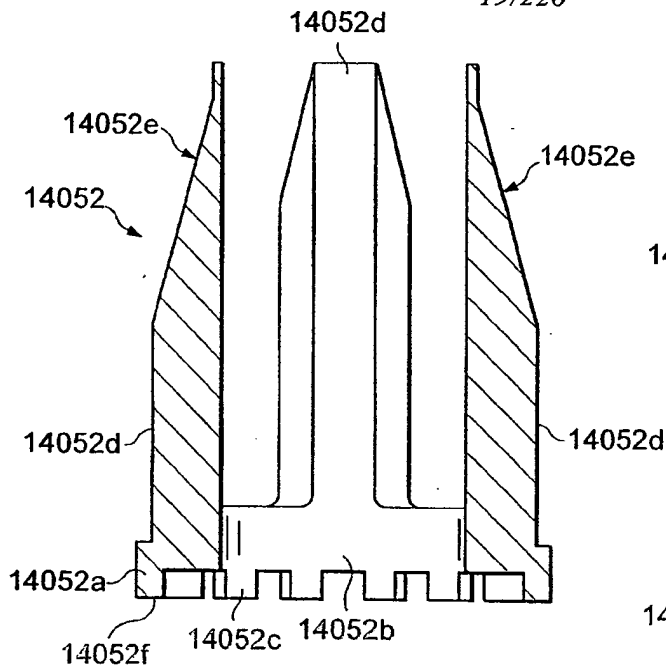


Fig. 11J

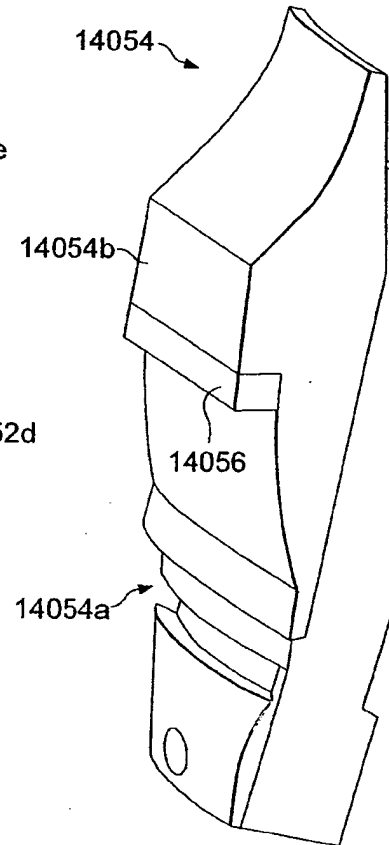


Fig. 11K

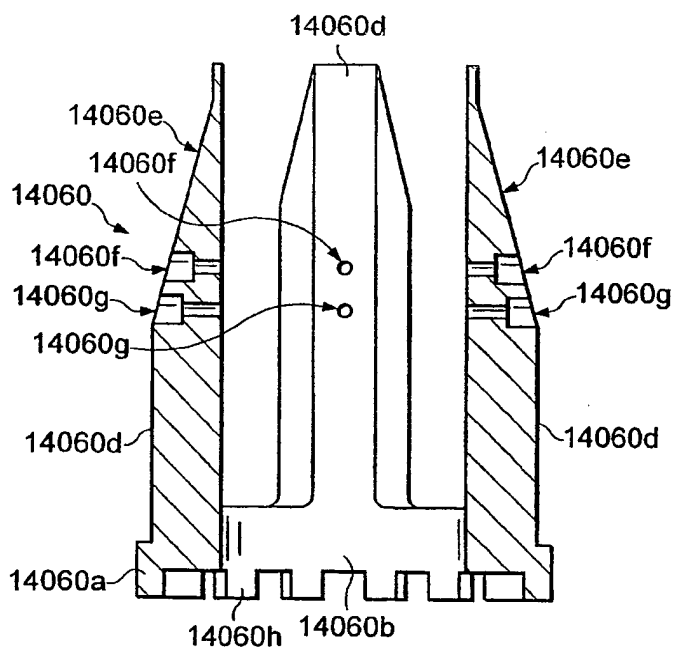


Fig. 11M

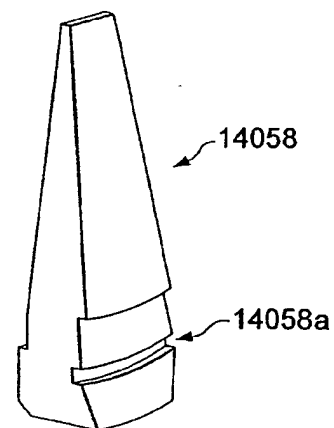


Fig. 11L

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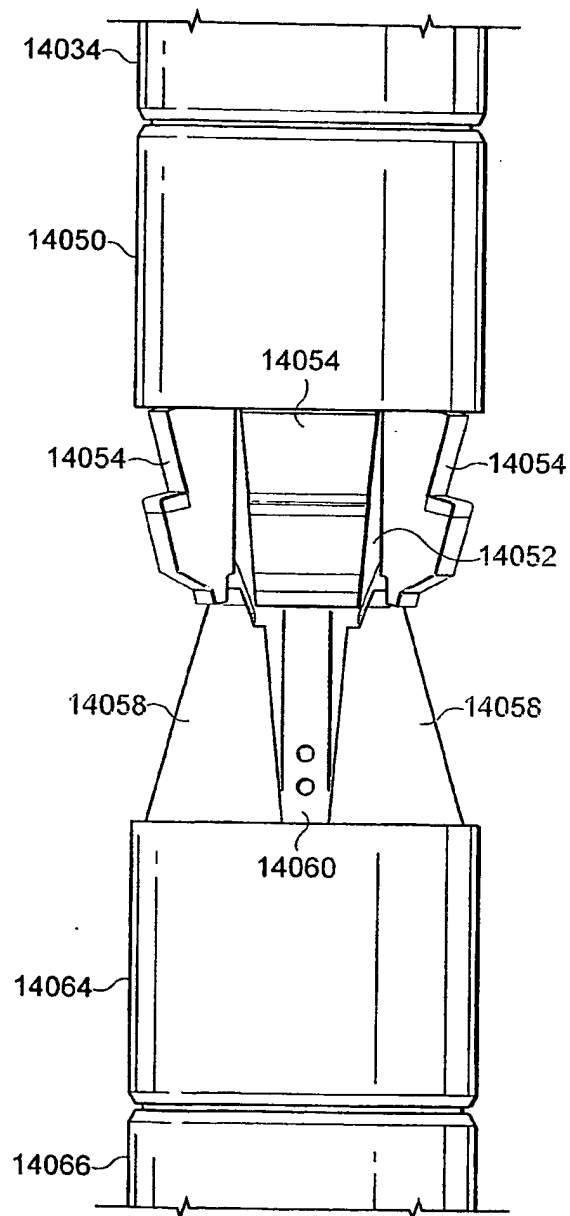


Fig. 11N

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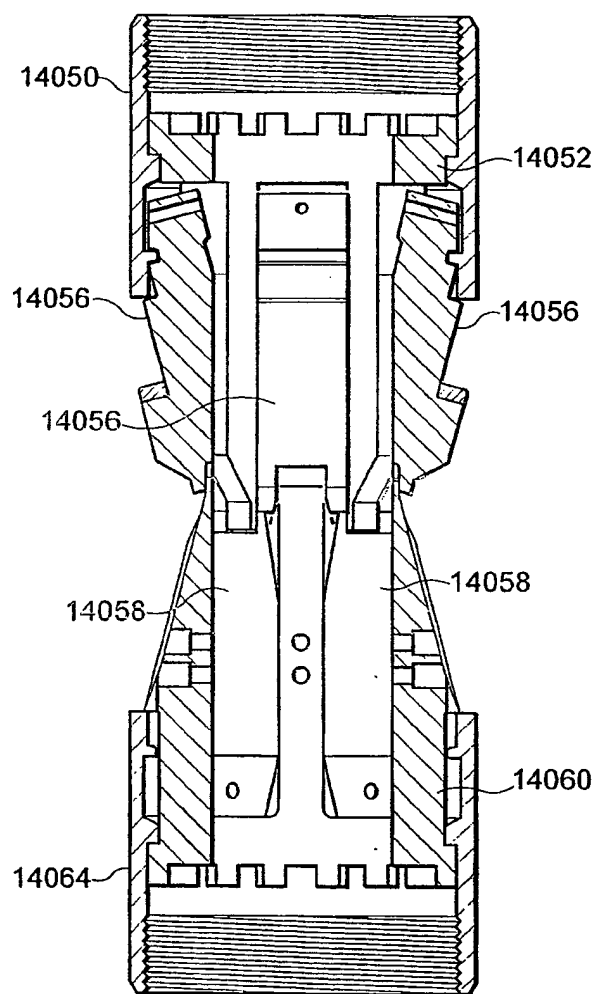
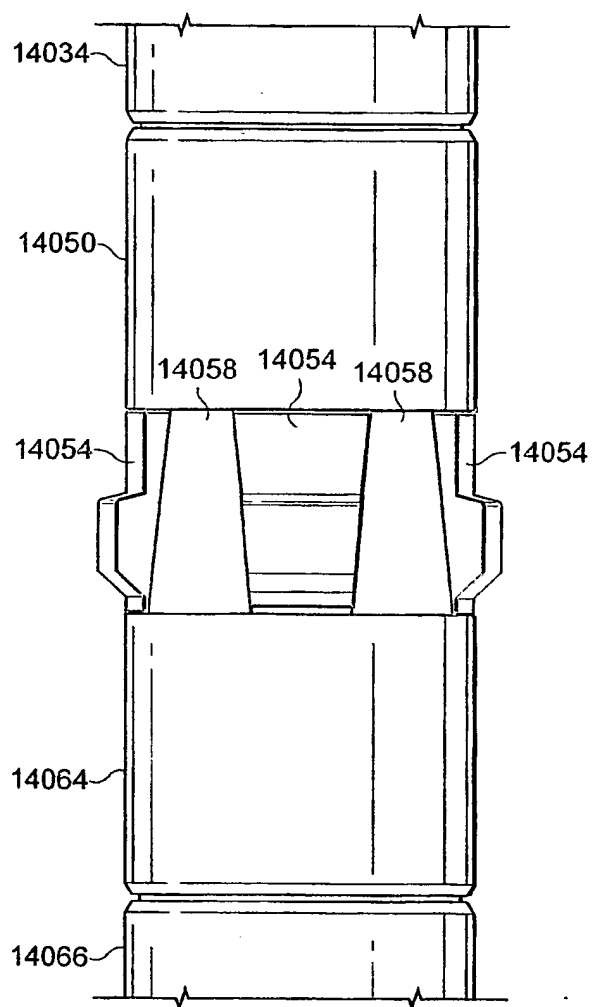


Fig. 110

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*Fig. 11P*

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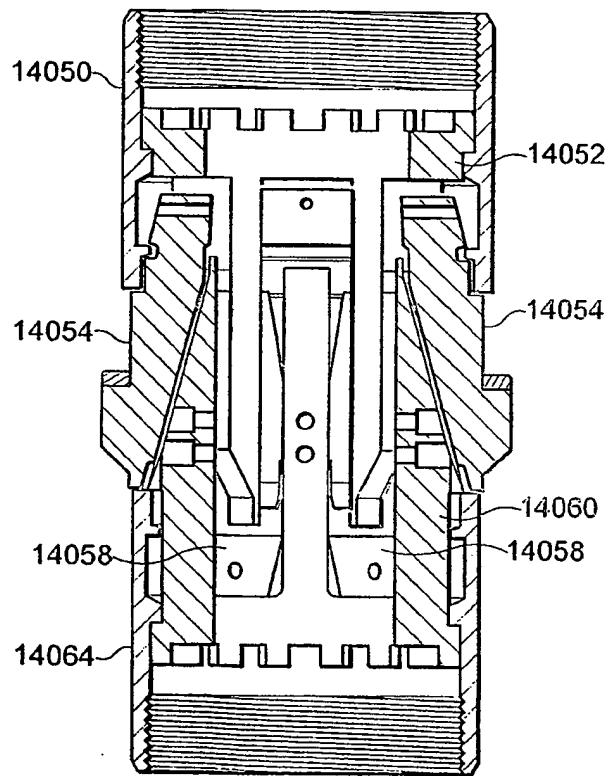
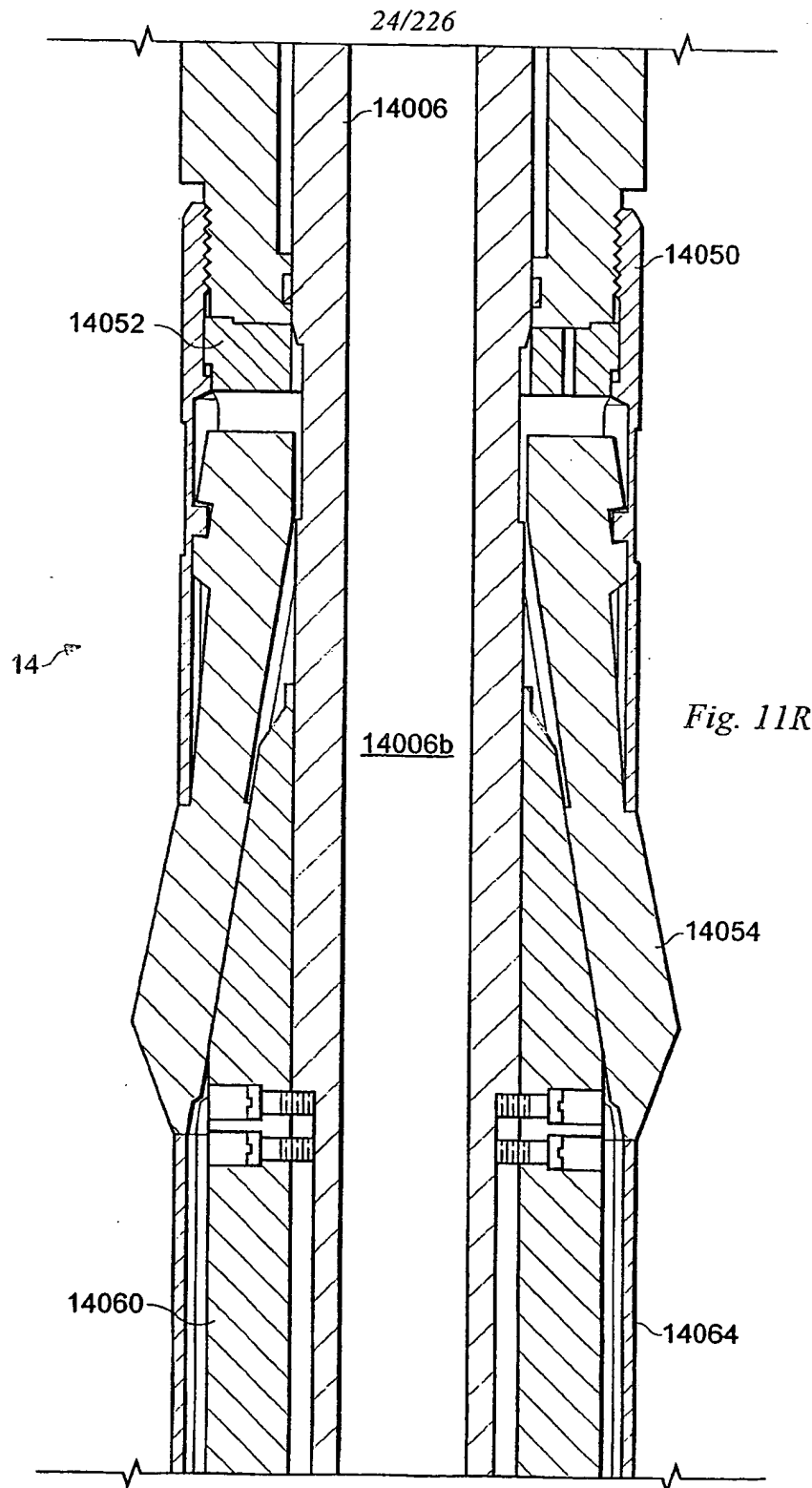


Fig. 11Q





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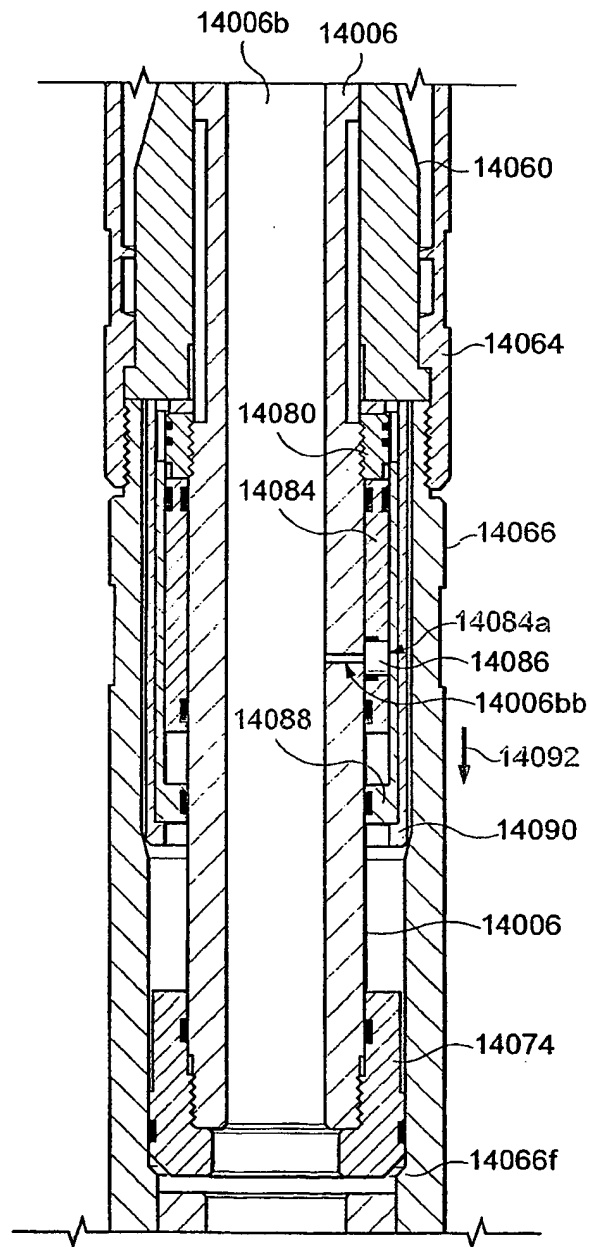


Fig. 11T

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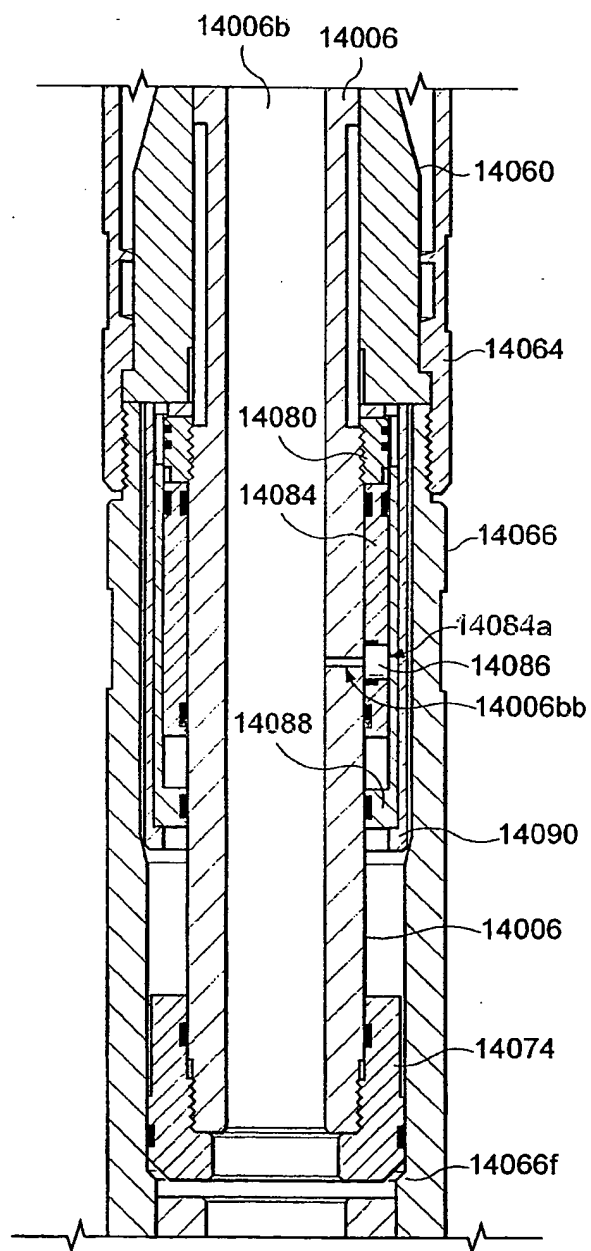


Fig. 11U

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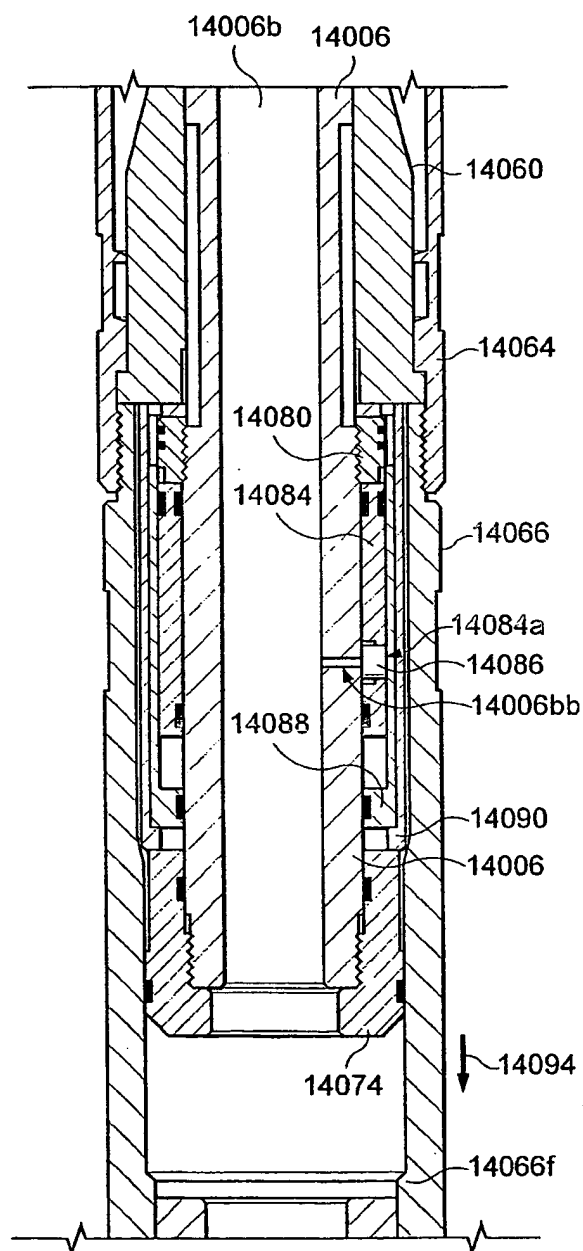


Fig. 11V

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Fig. 11W

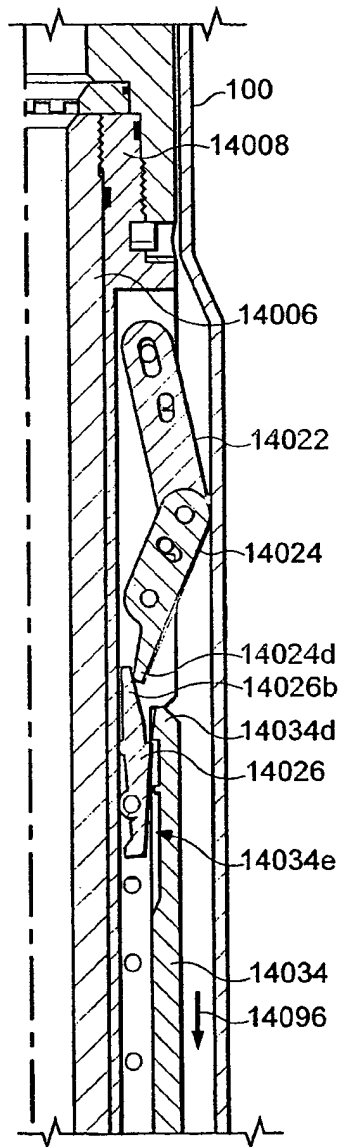


Fig. 11X

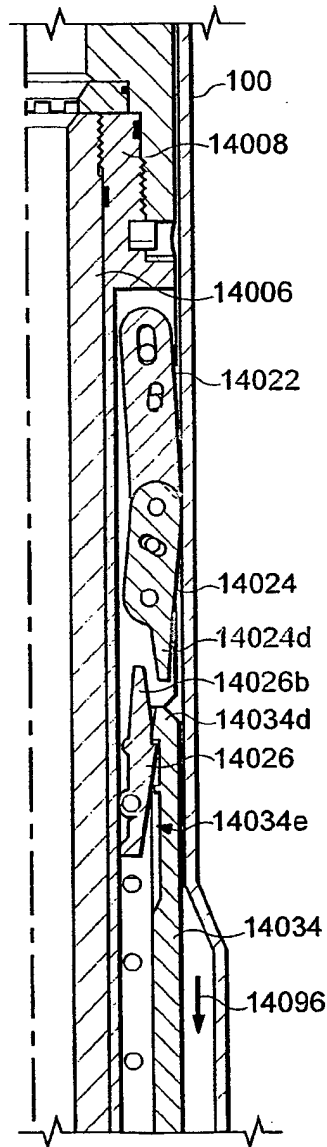
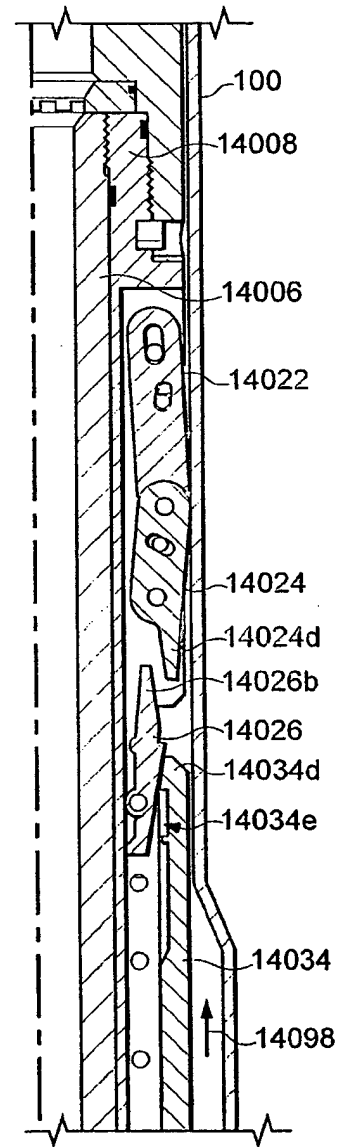


Fig. 11Y



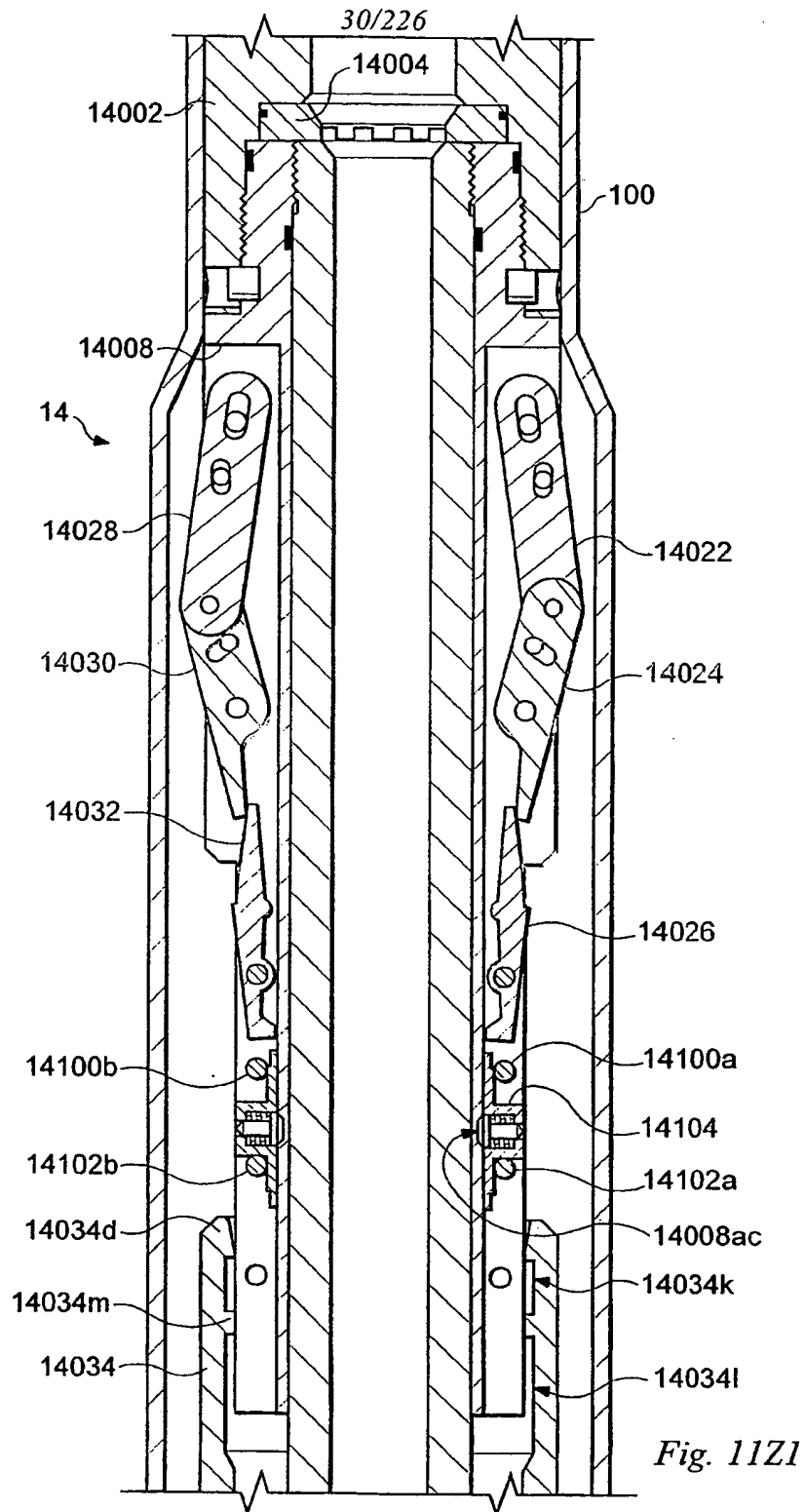


Fig. 11Z1

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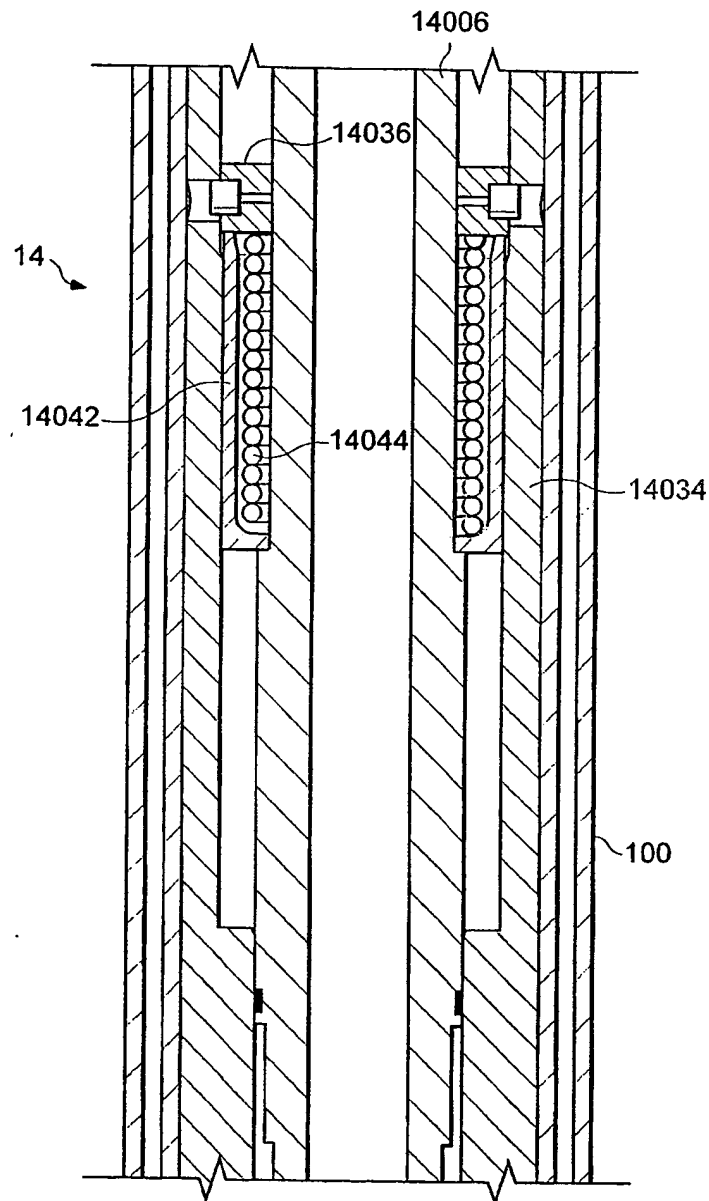


Fig. 11Z2

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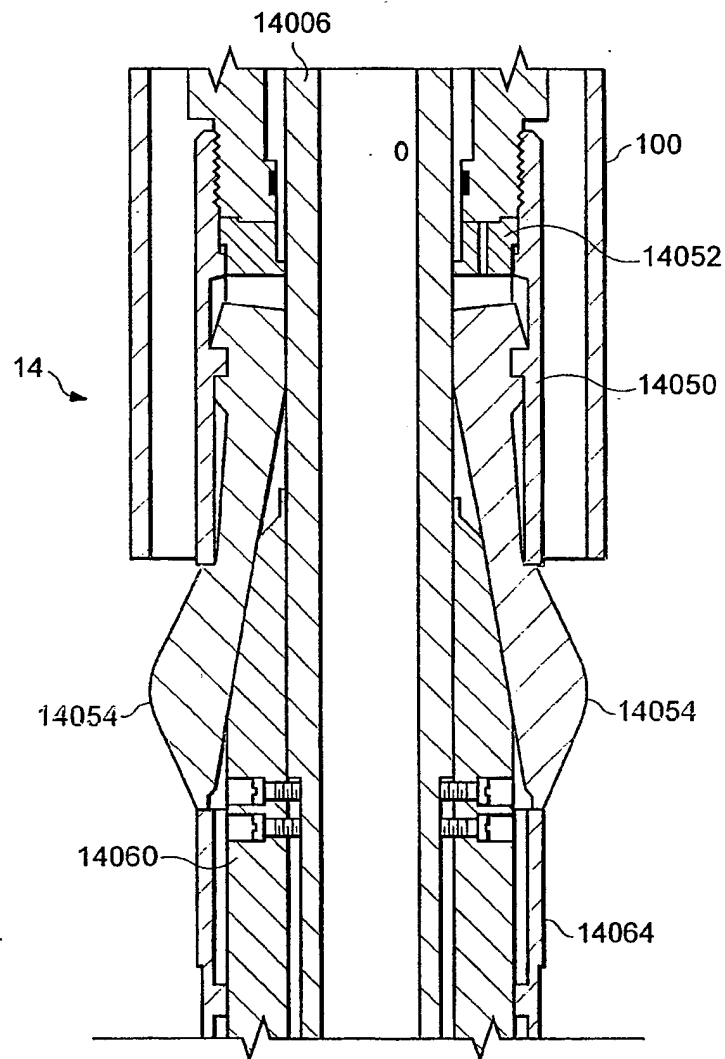


Fig. 11Z3

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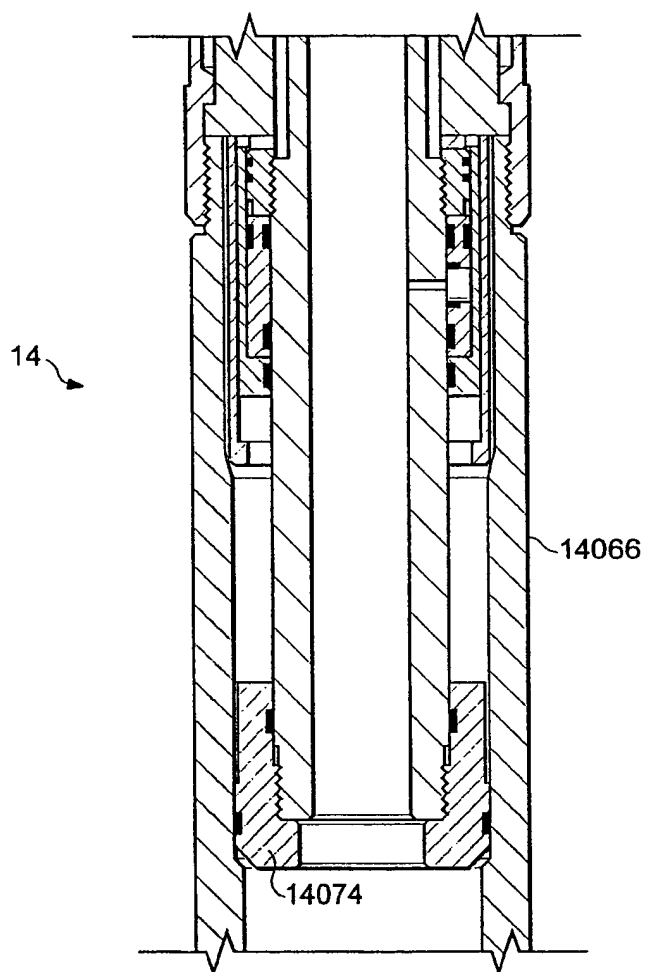


Fig. 11Z4

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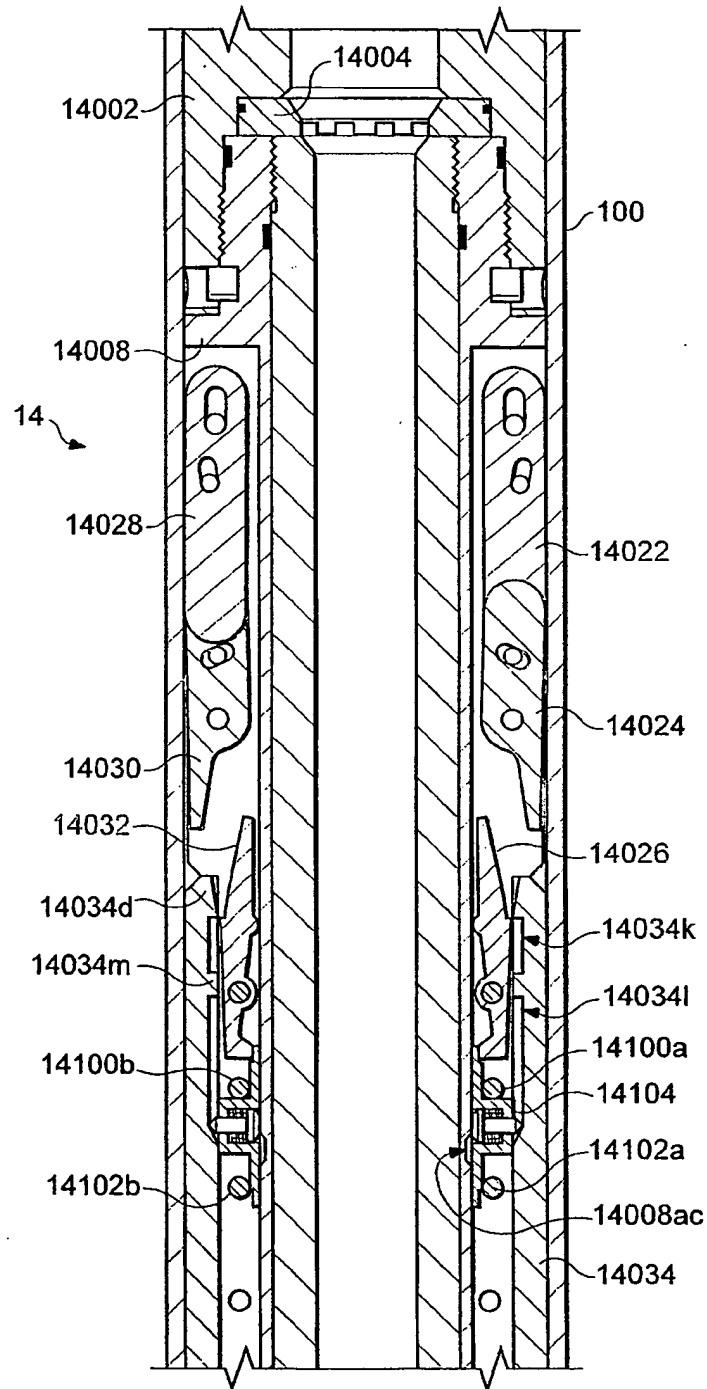


Fig. 11AA1

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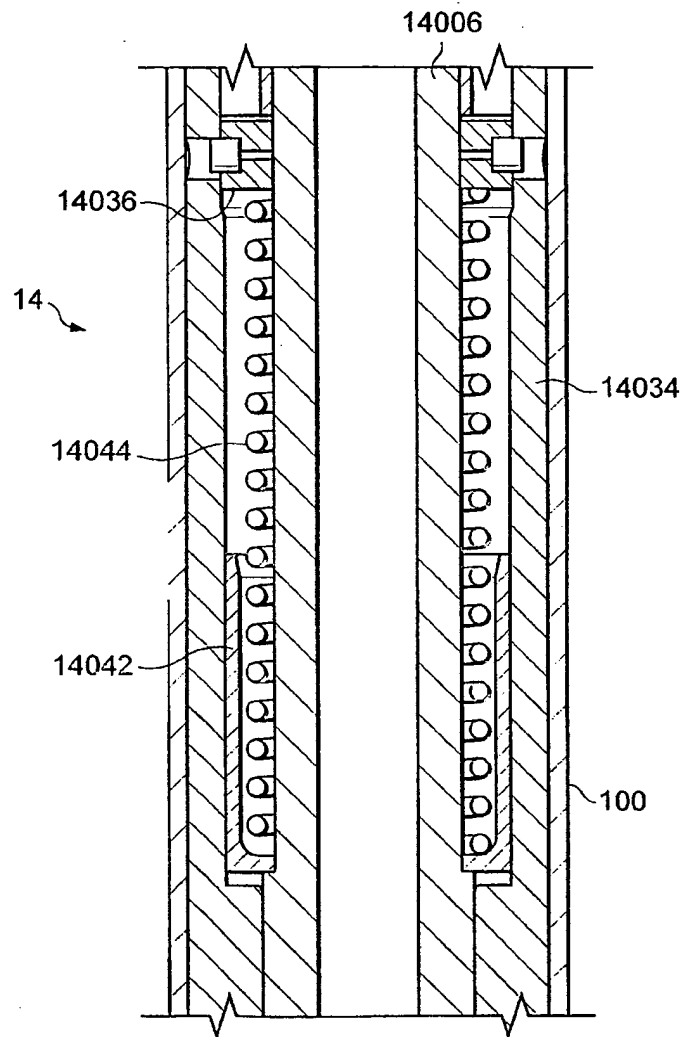


Fig. 11AA2

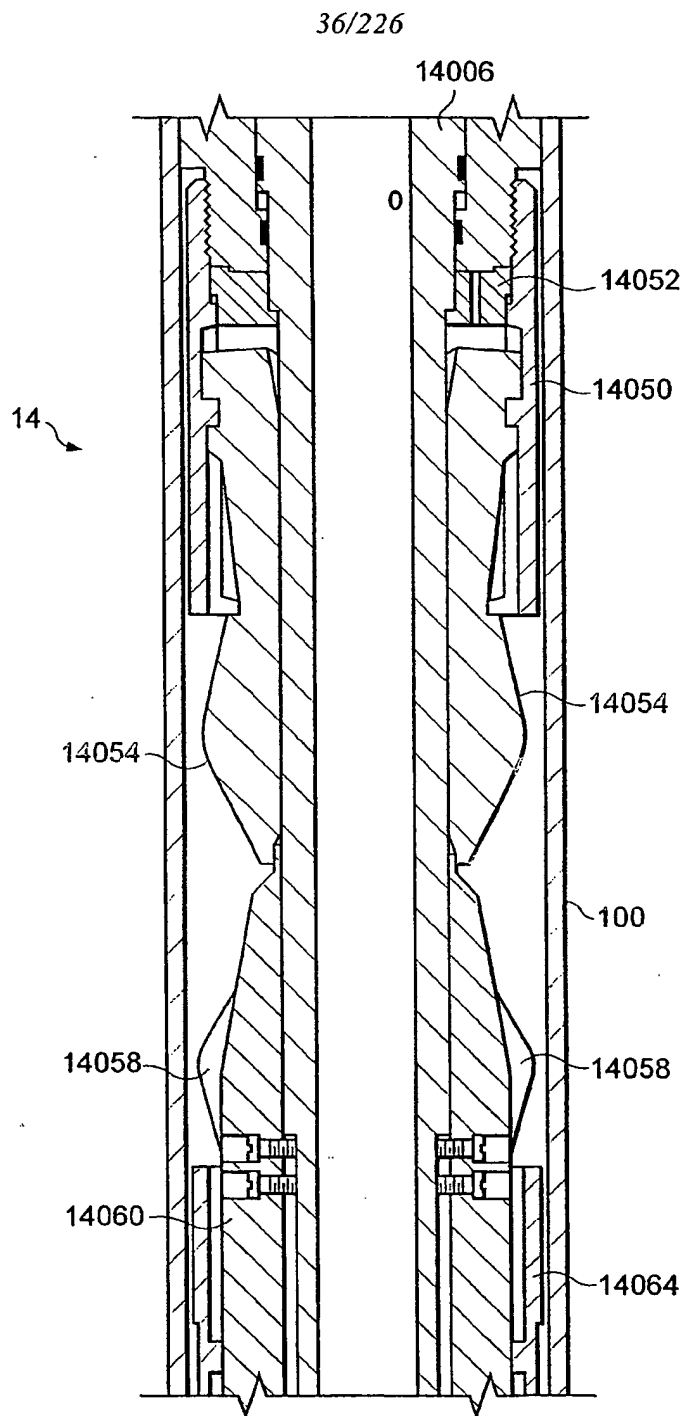
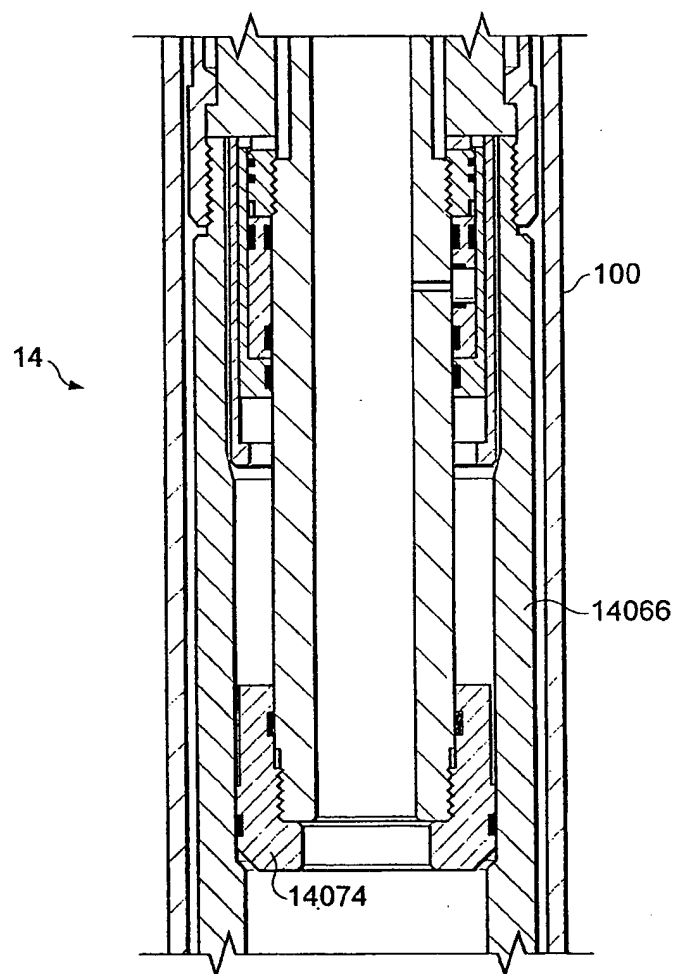


Fig. 11AA3

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*Fig. 11AA4*

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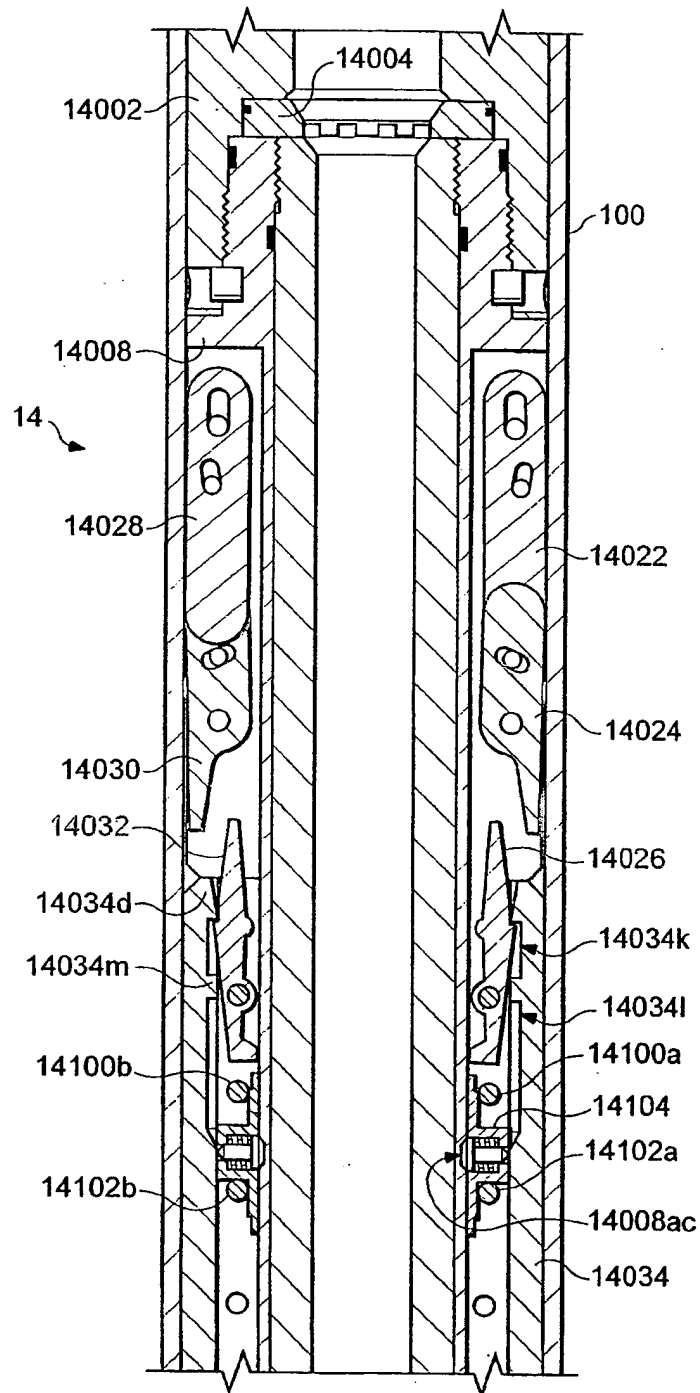


Fig. 11AB1

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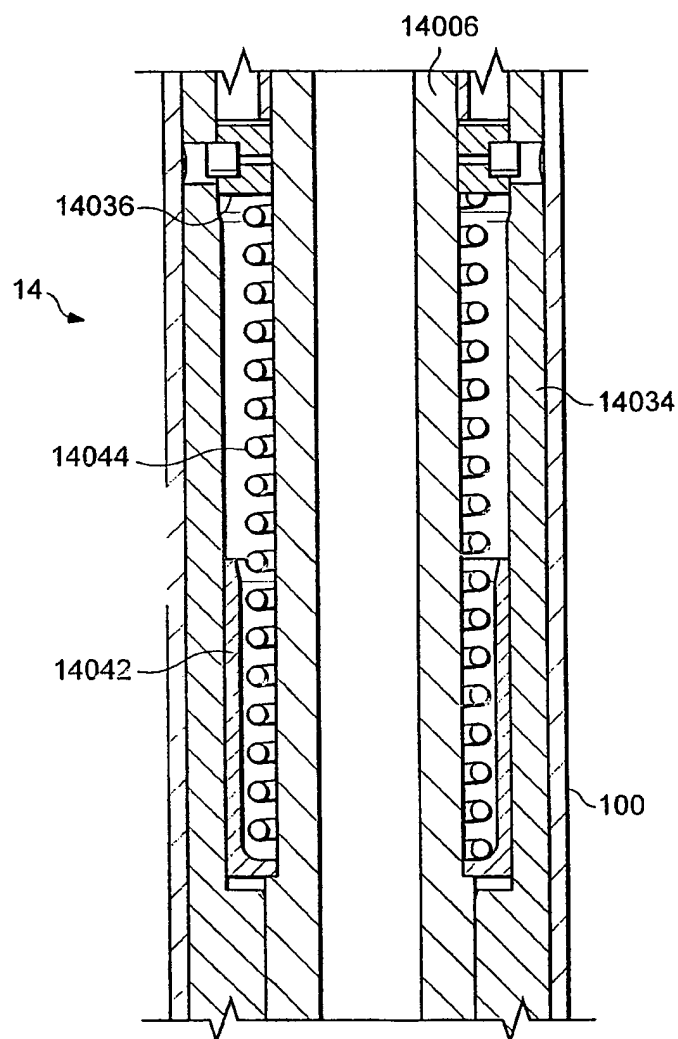
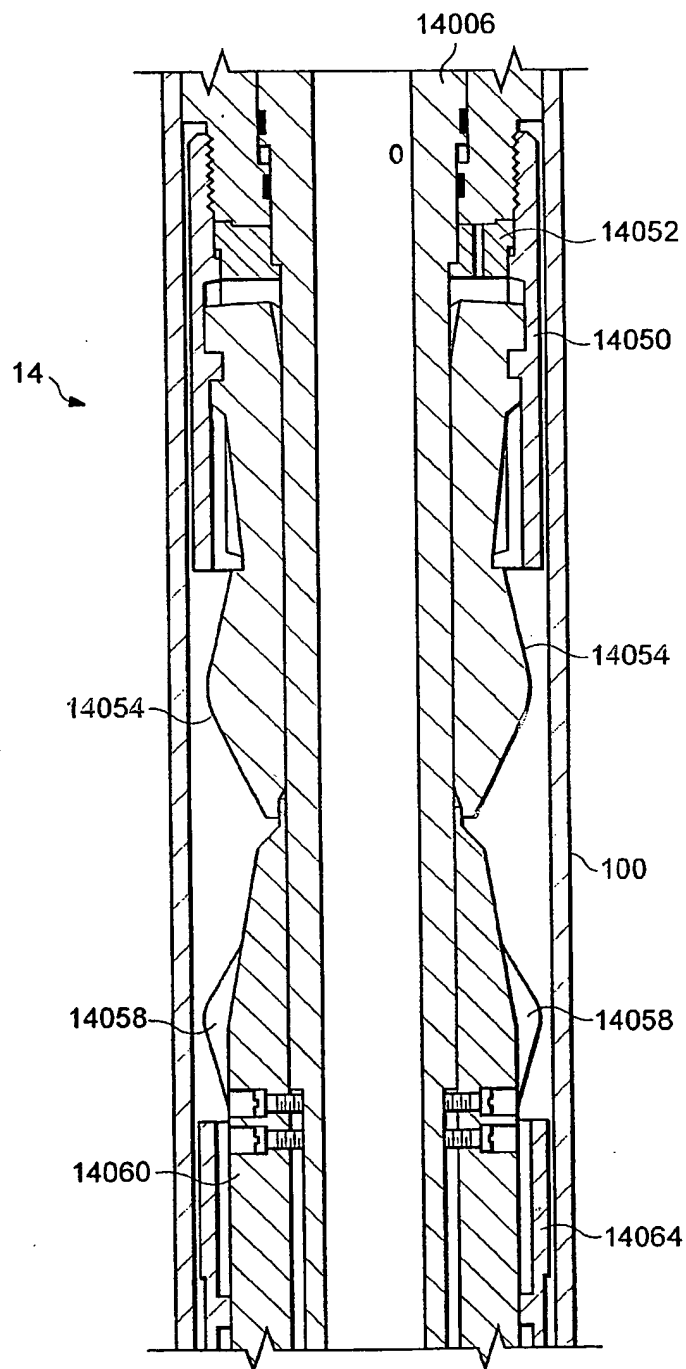


Fig. 11AB2

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*Fig. 11AB3*

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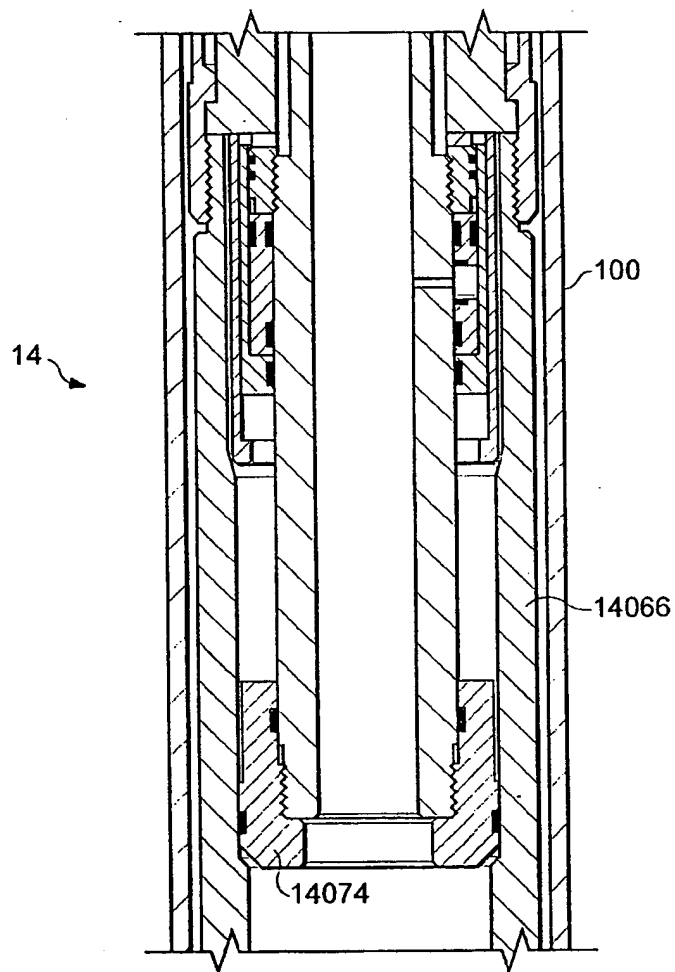


Fig. 11AB4

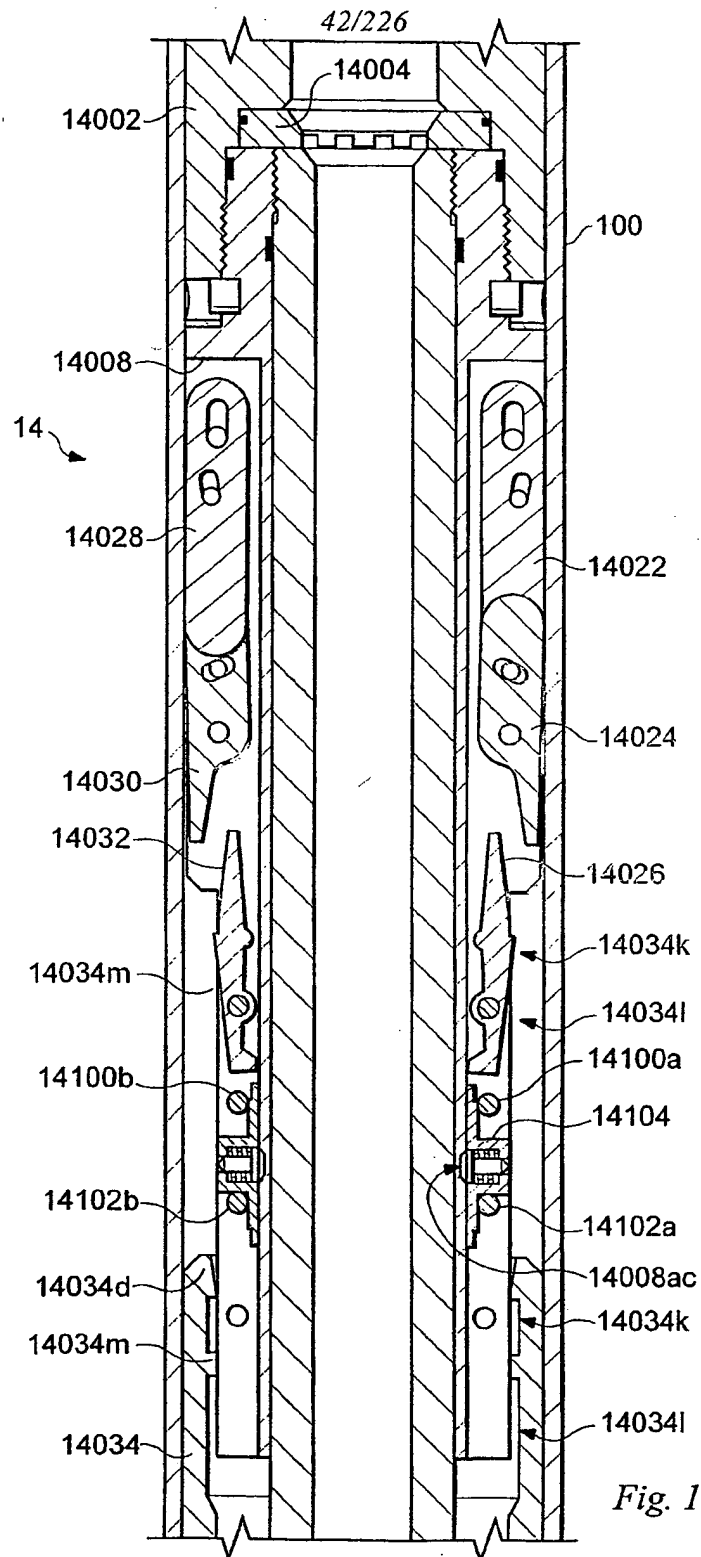


Fig. 11AC1

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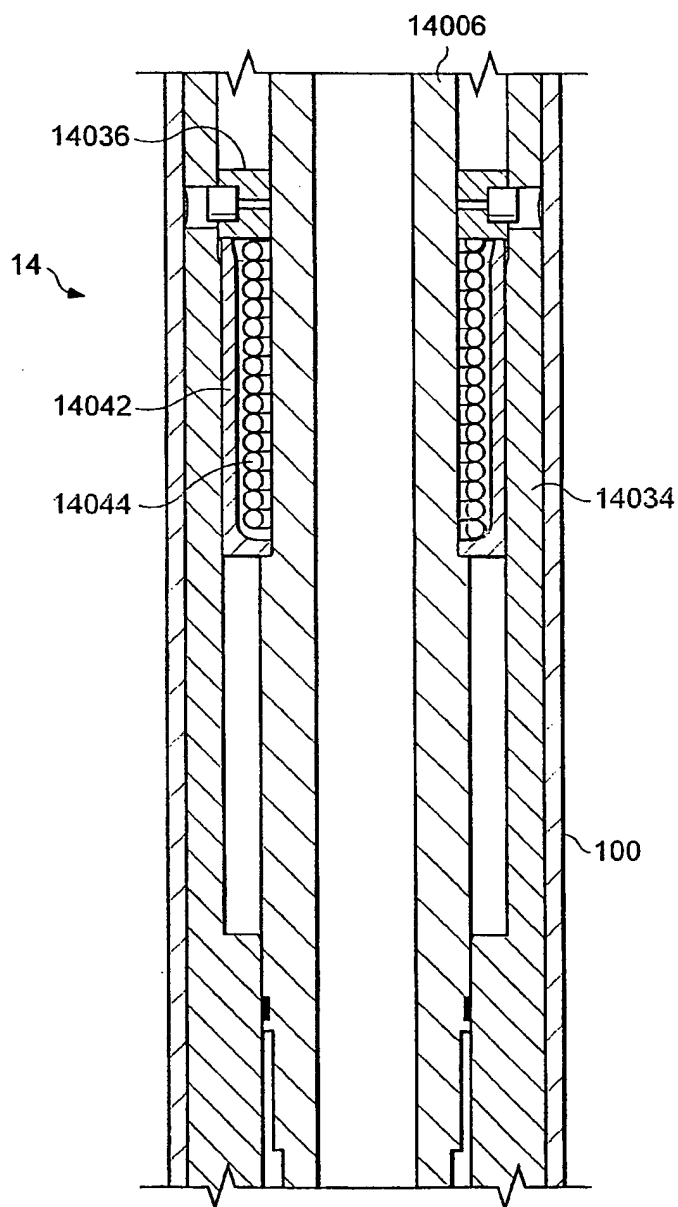


Fig. 11AC2

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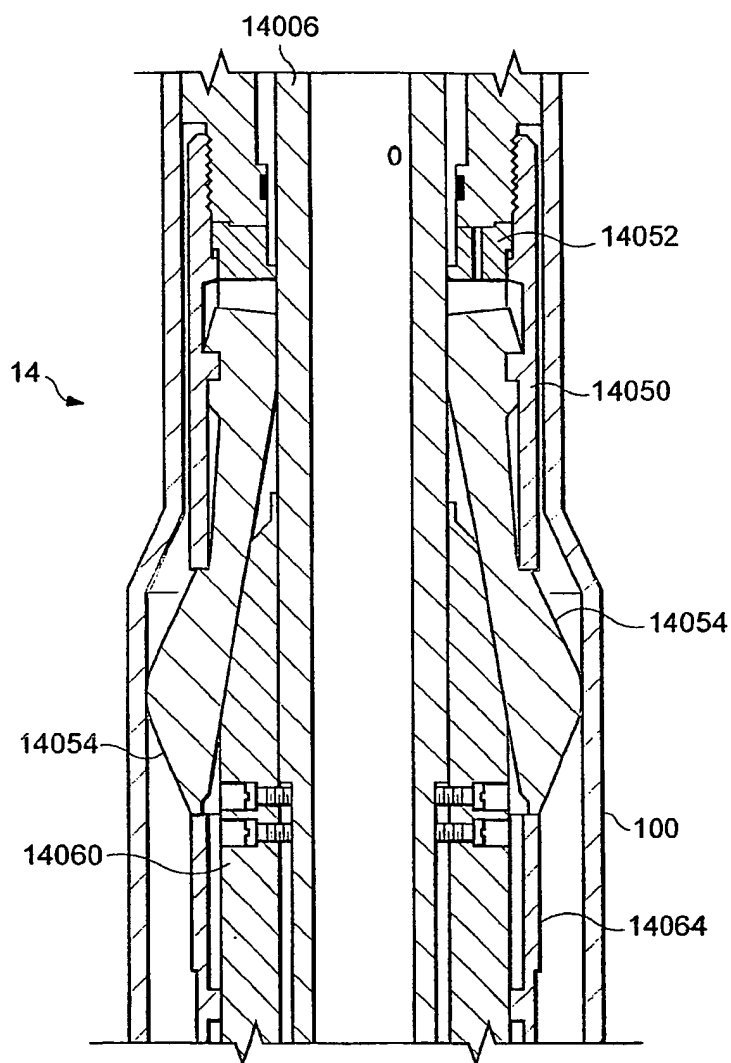
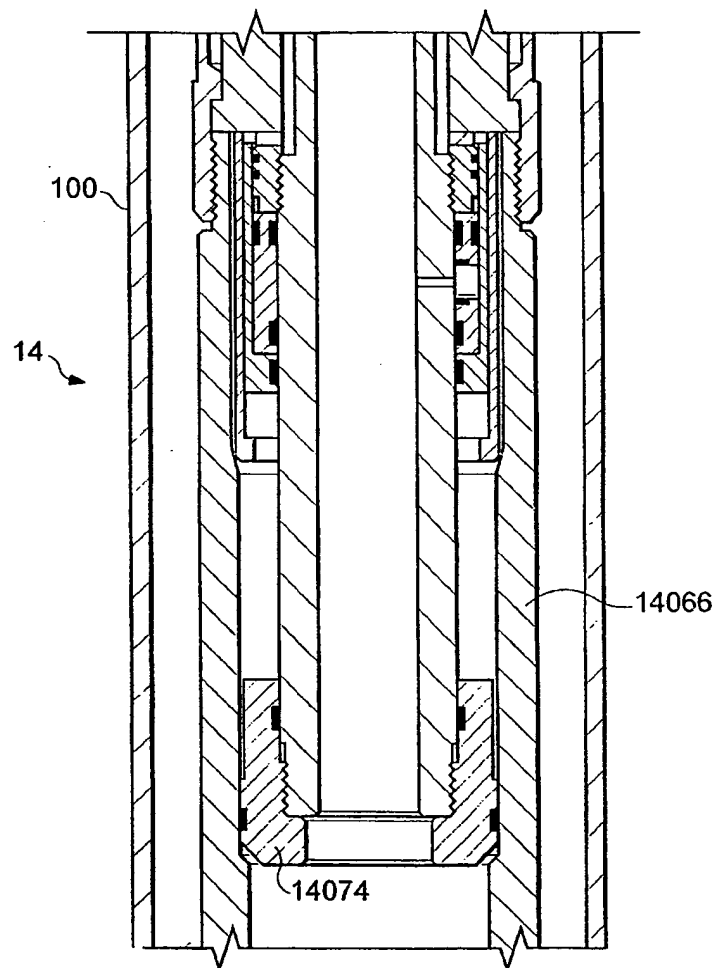


Fig. 11AC3

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*Fig. 11AC4*

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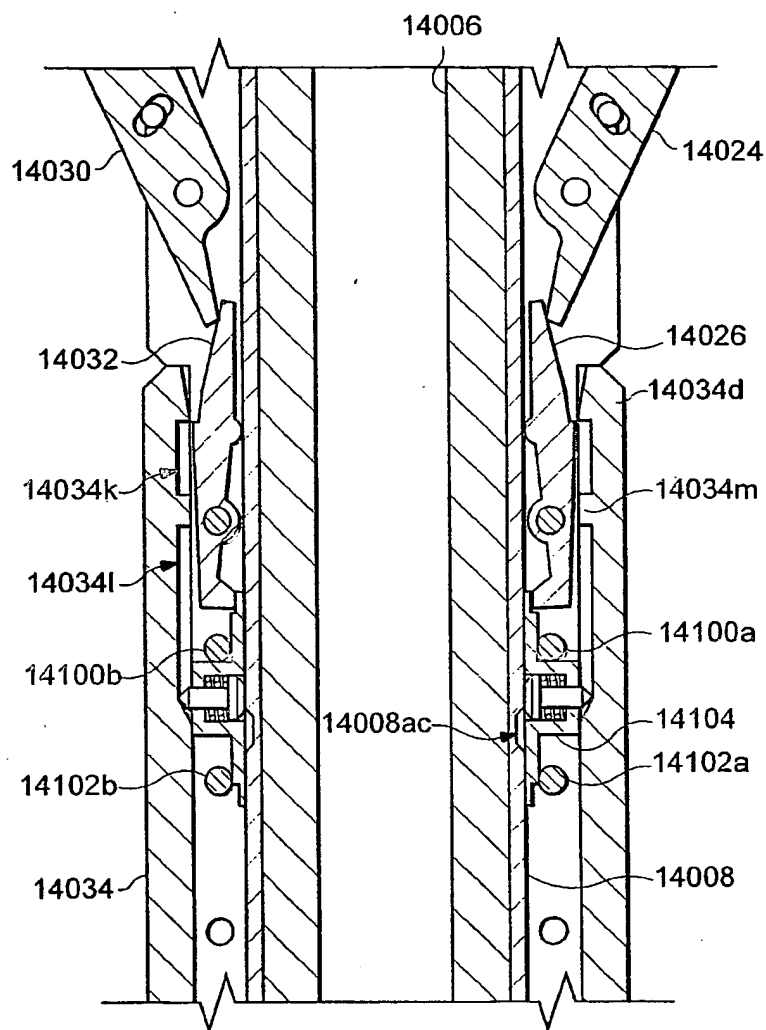


Fig. 11AD

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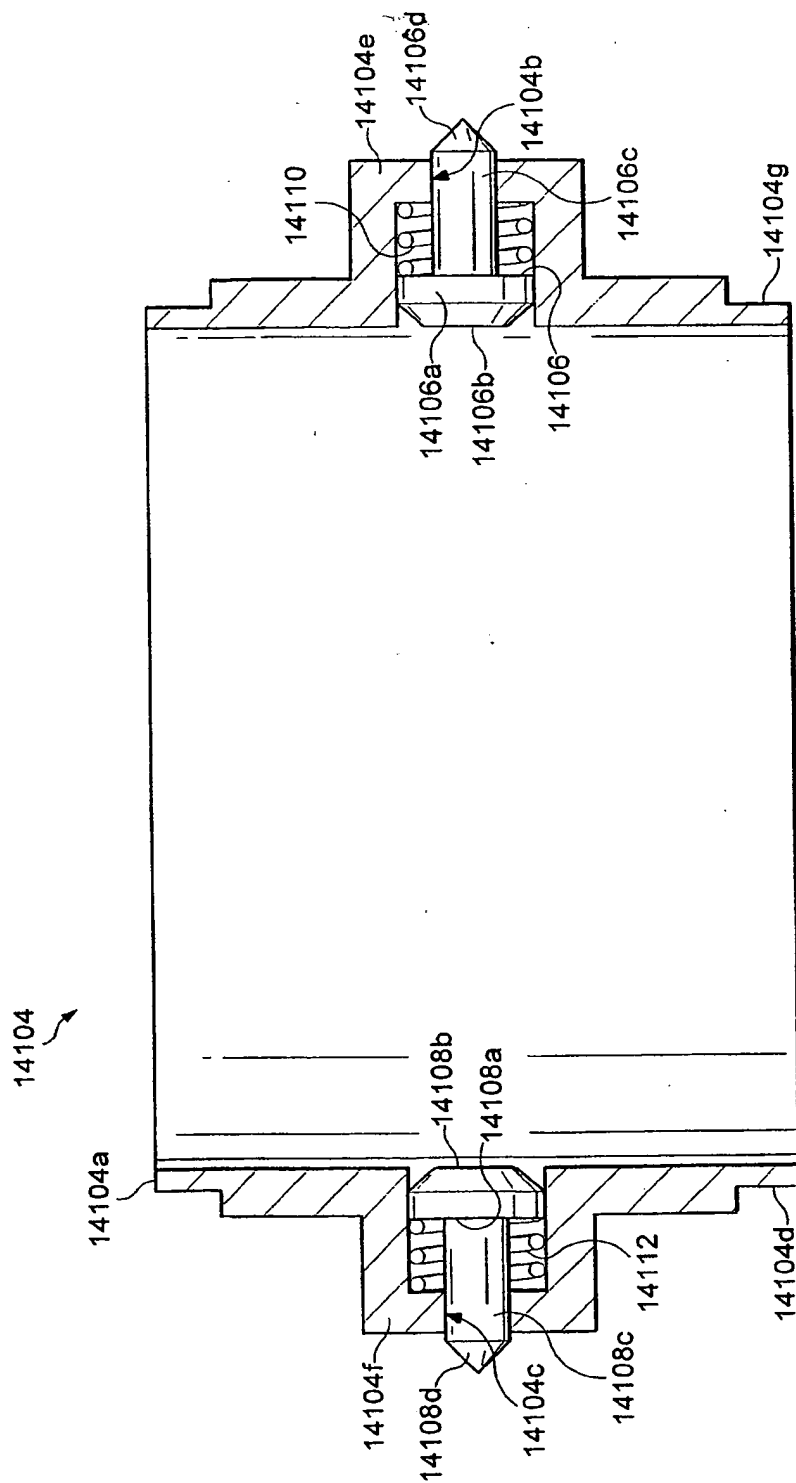


Fig. 11AE



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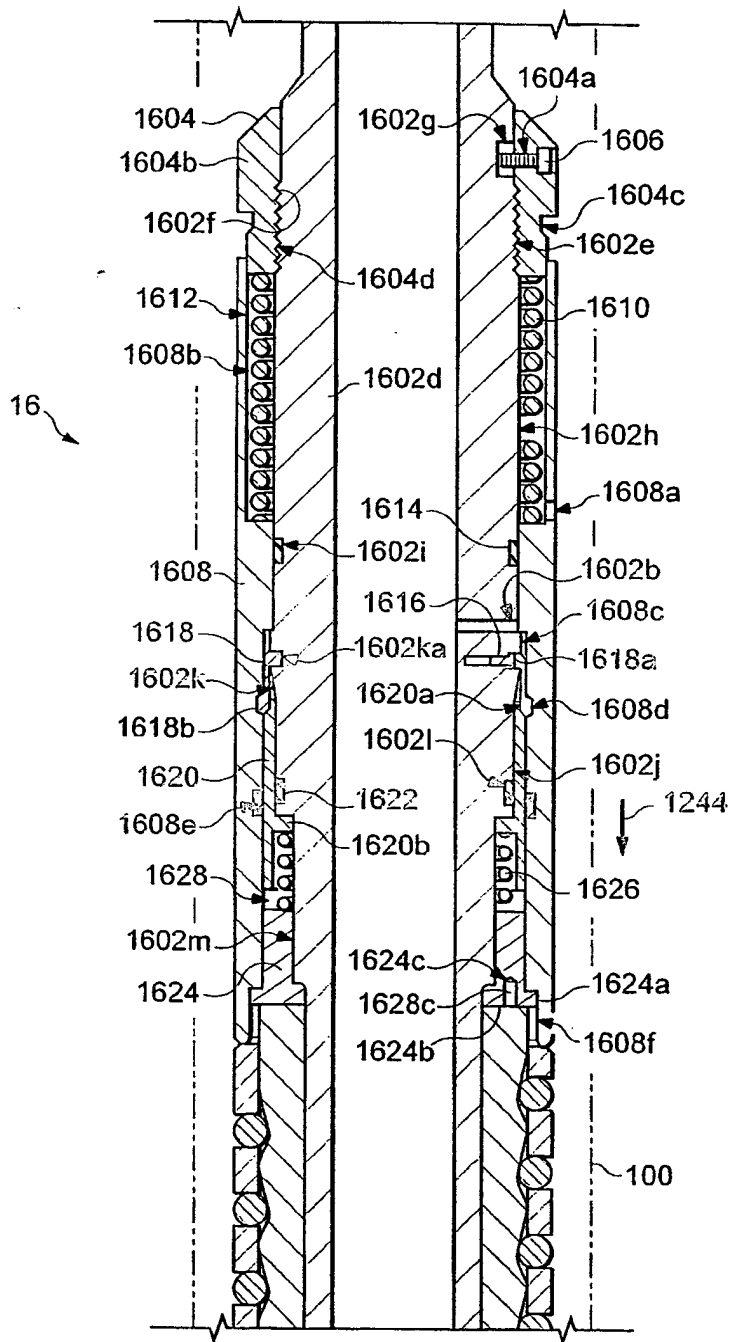


Fig. 12A2

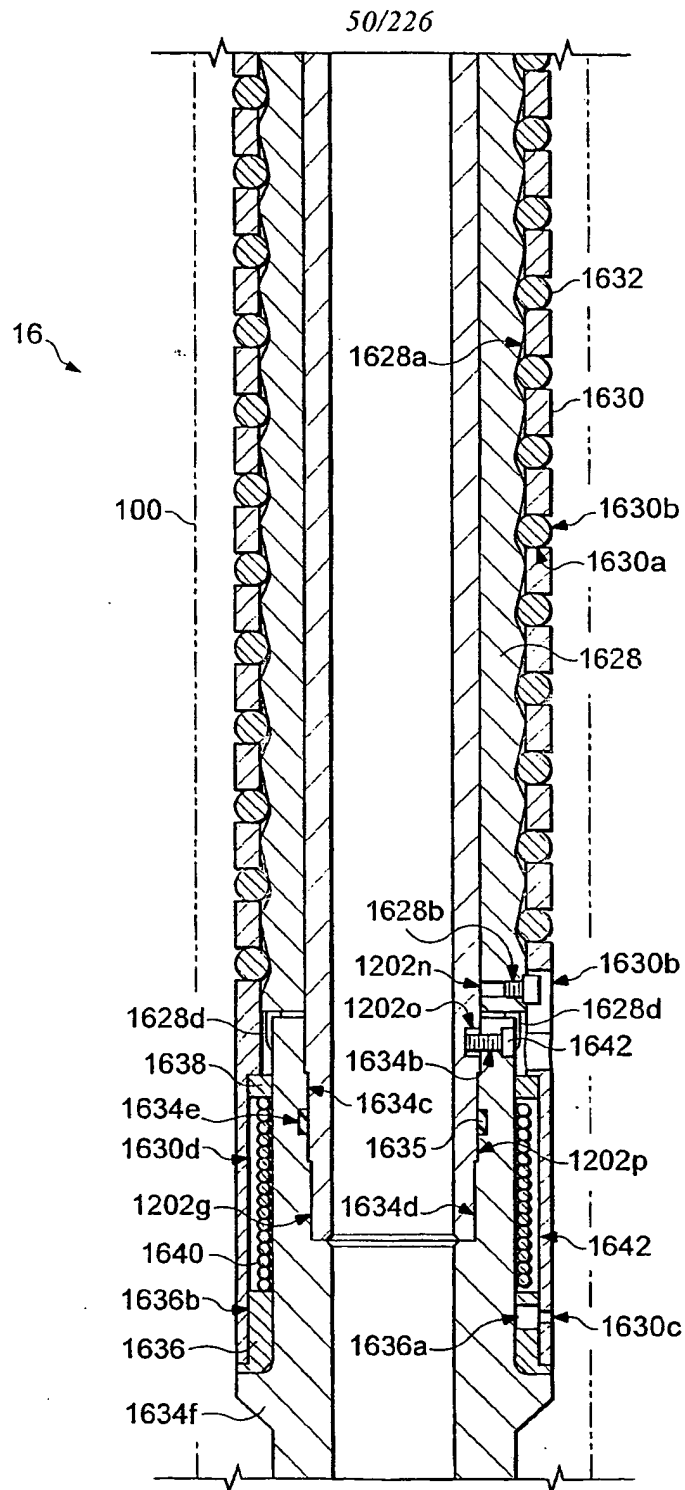


Fig. 12A3

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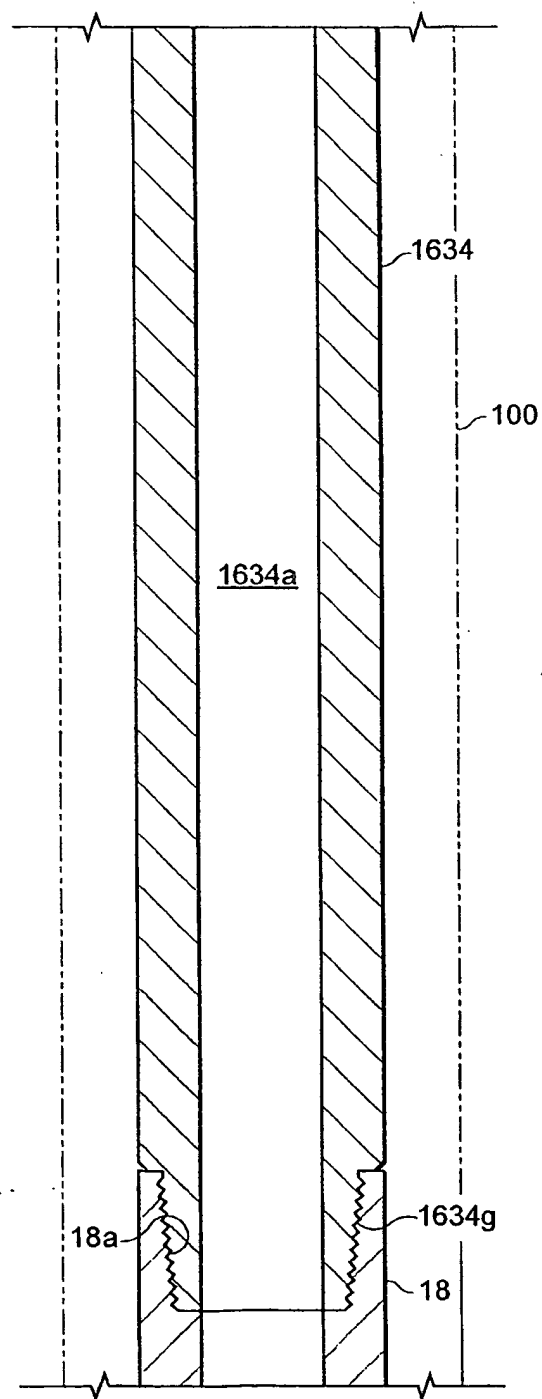


Fig. 12A4

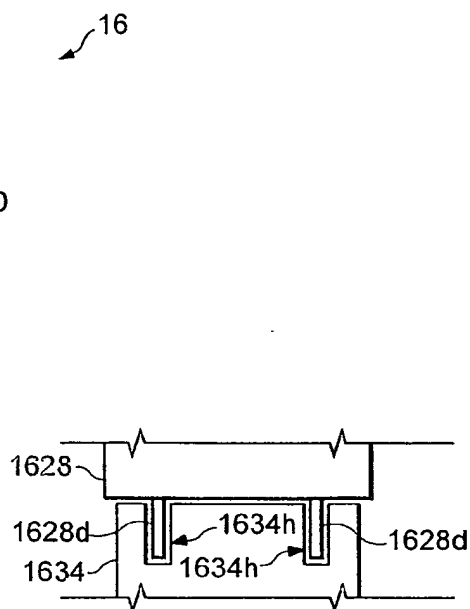


Fig. 12B

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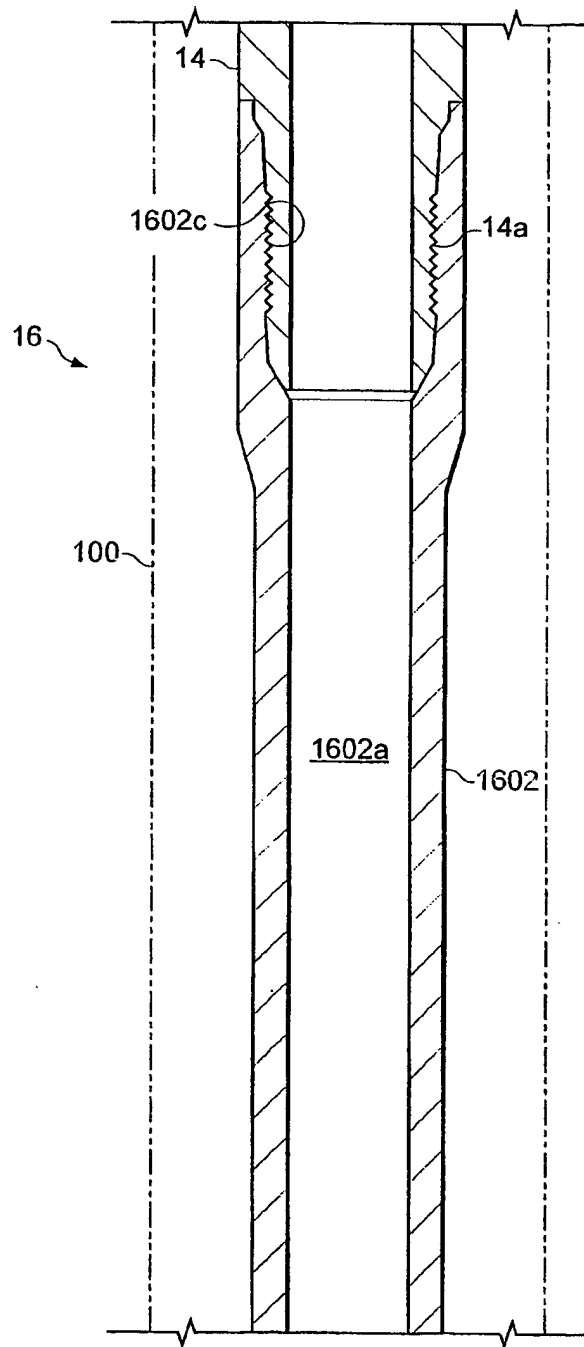


Fig. 12C1

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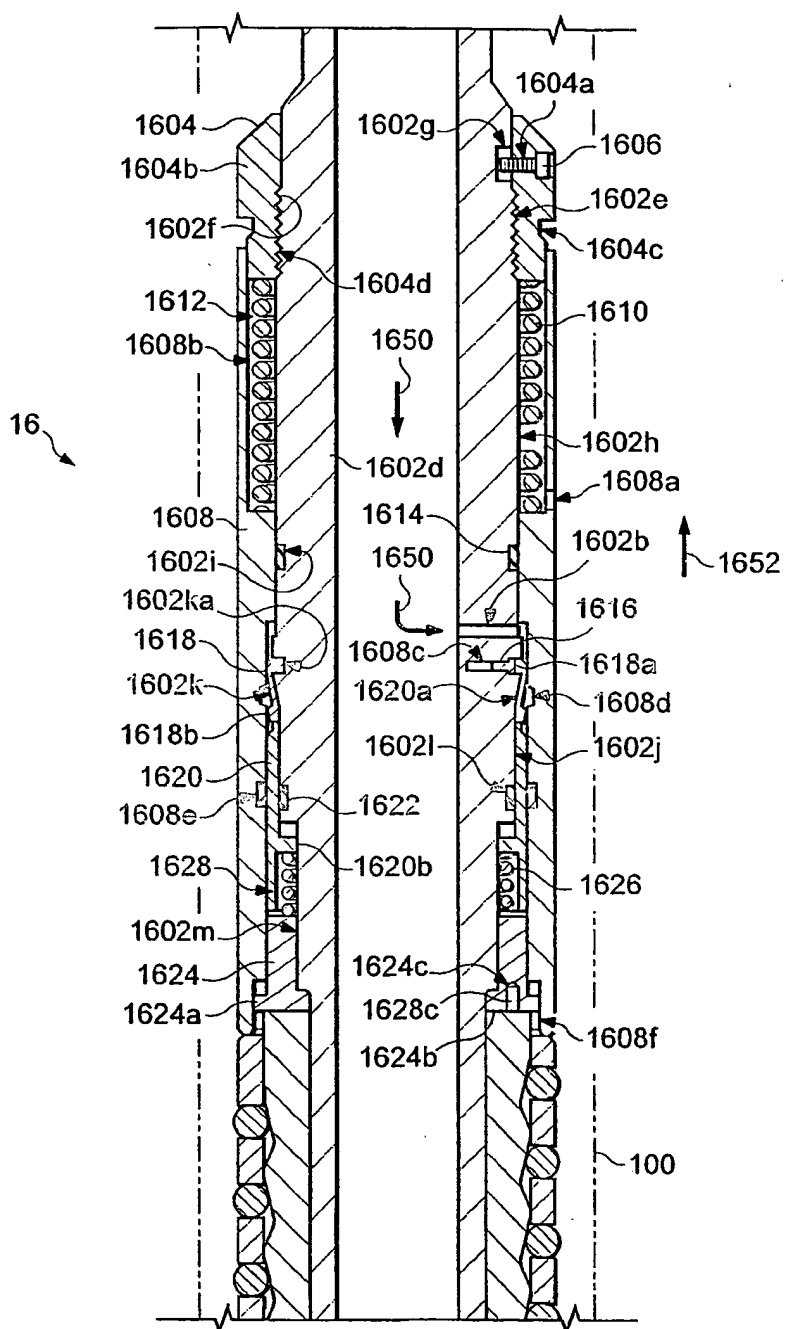


Fig. 12C2

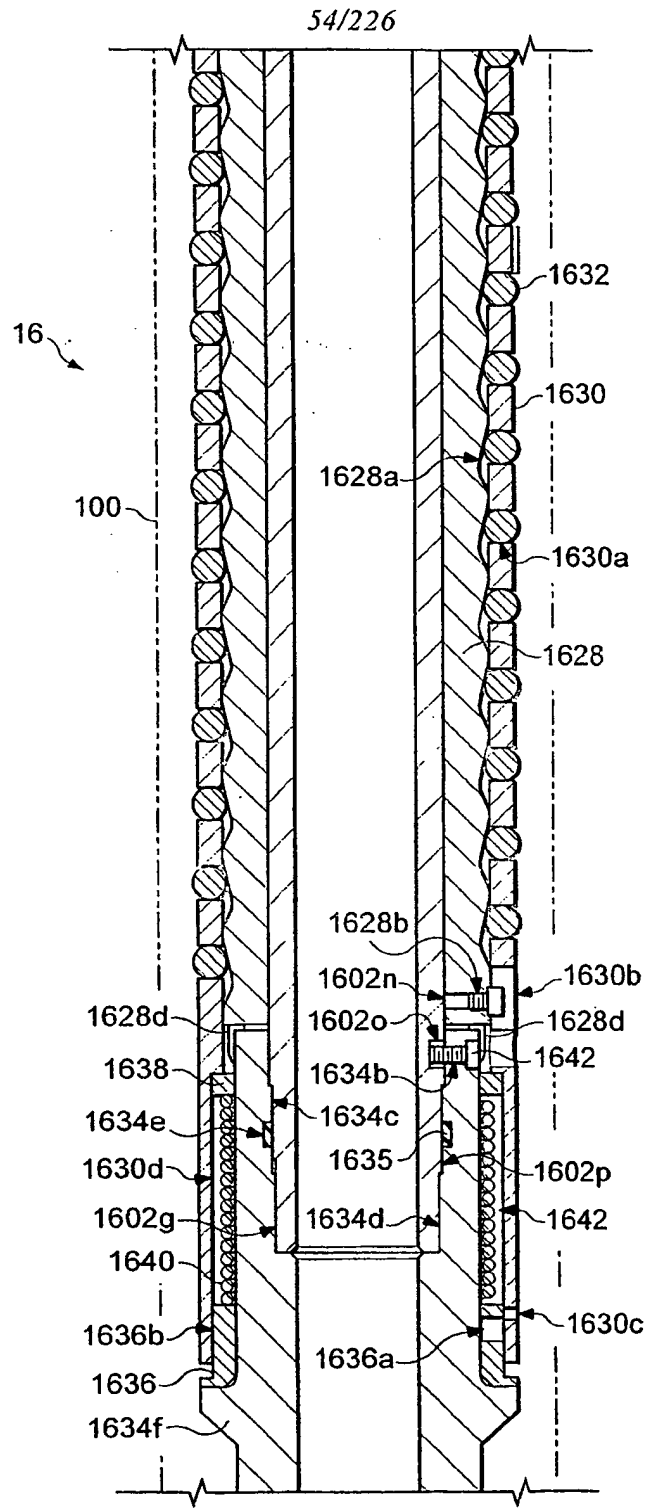


Fig. 12C3

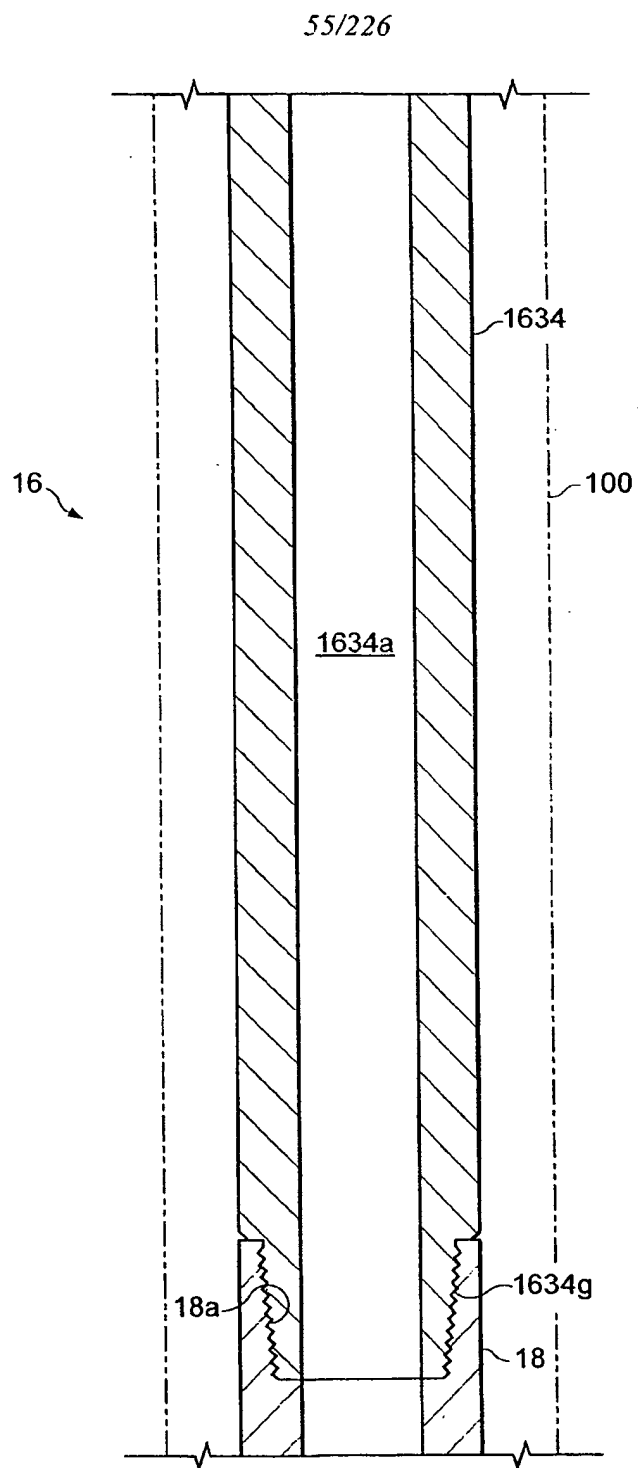


Fig. 12C4

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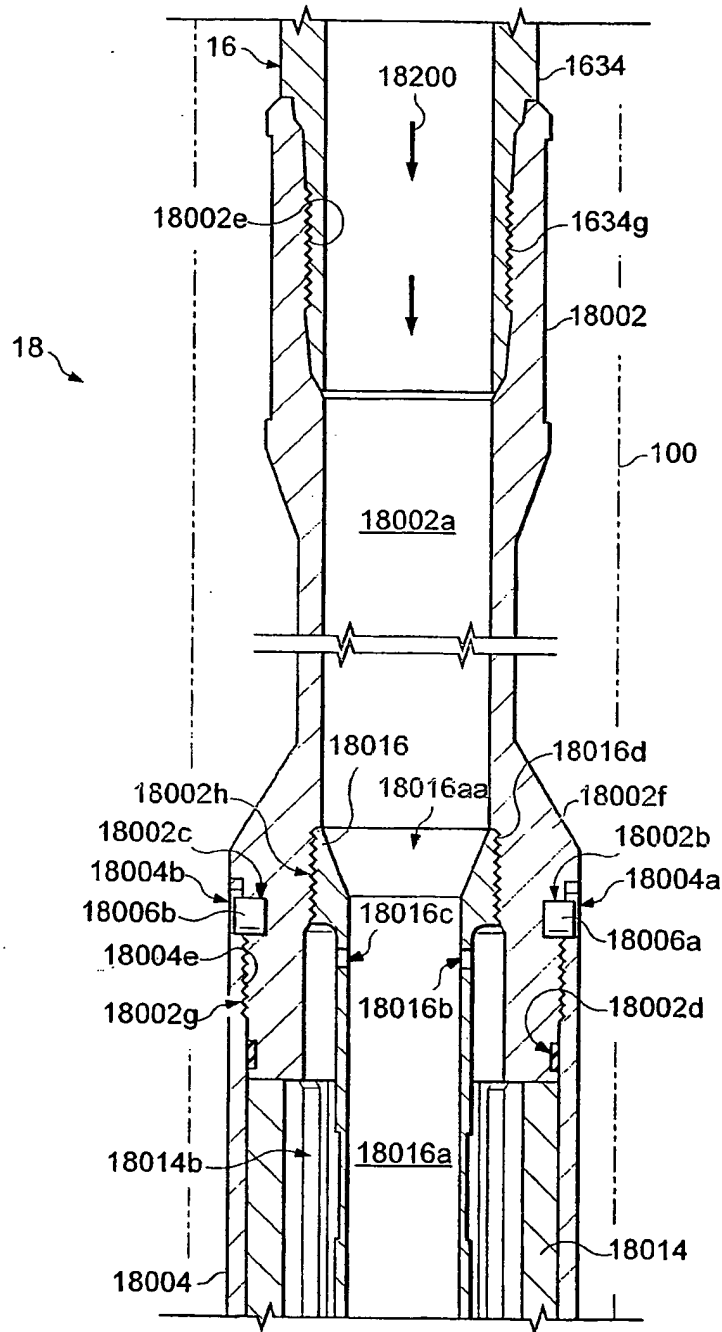
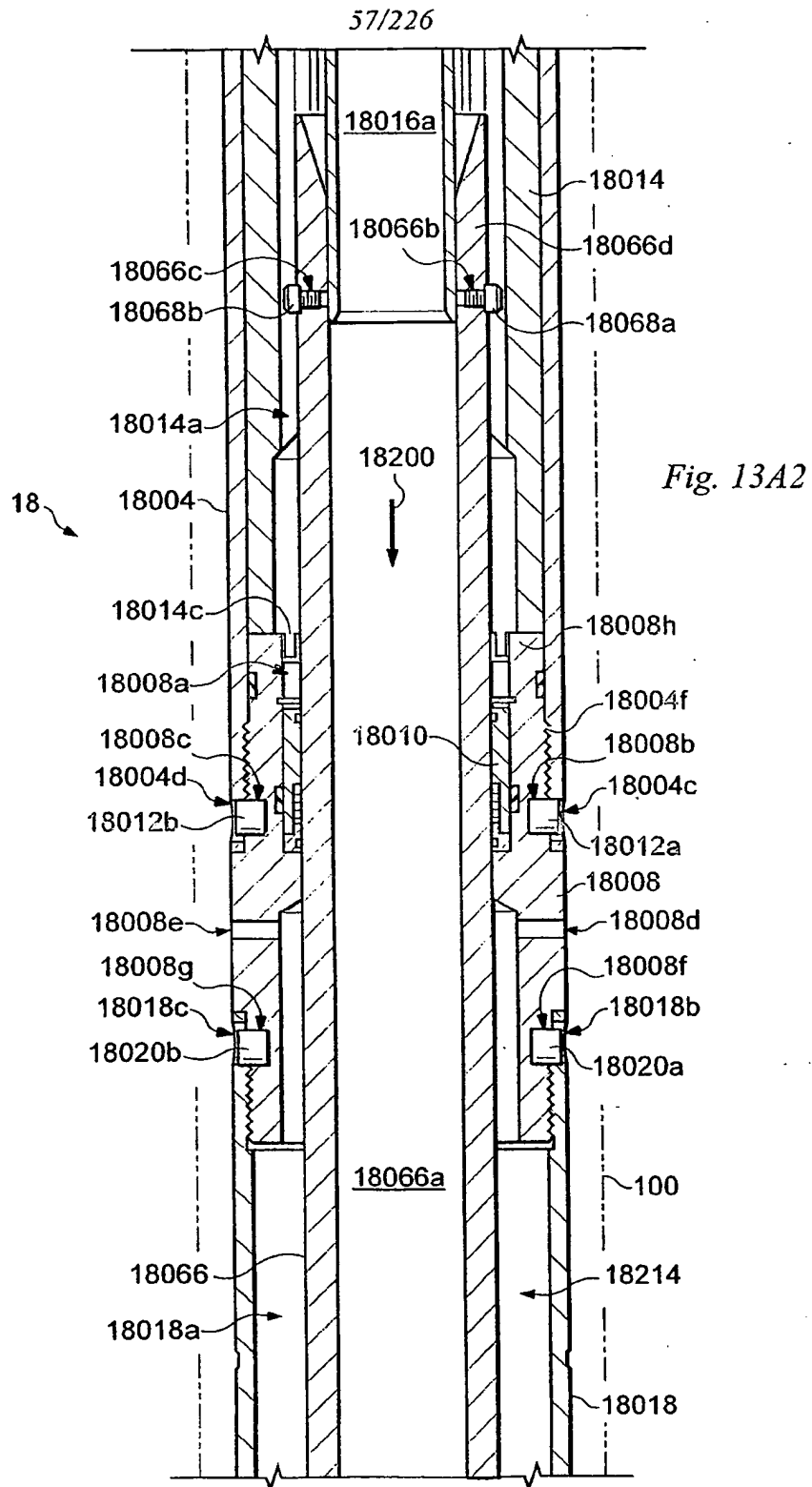


Fig. 13A1



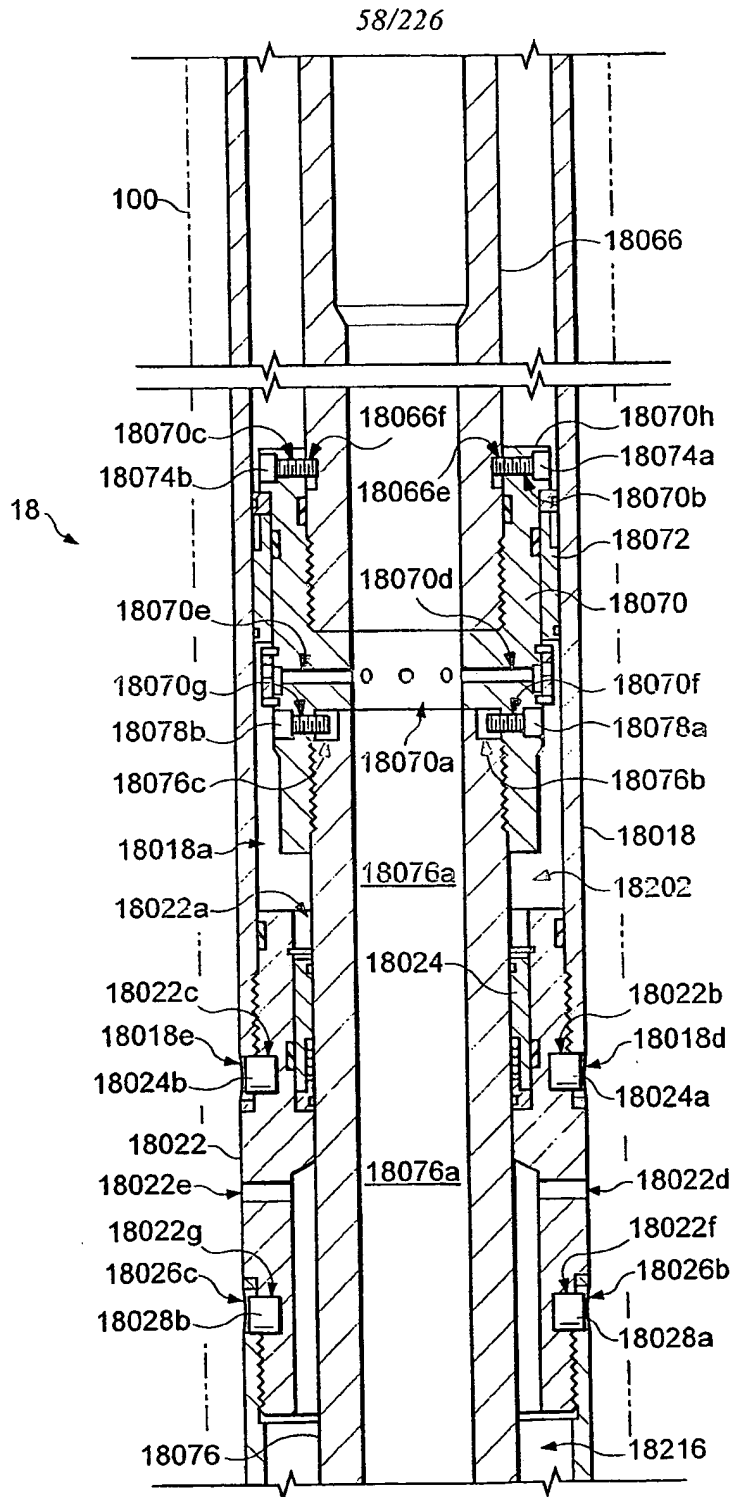


Fig. 13A3

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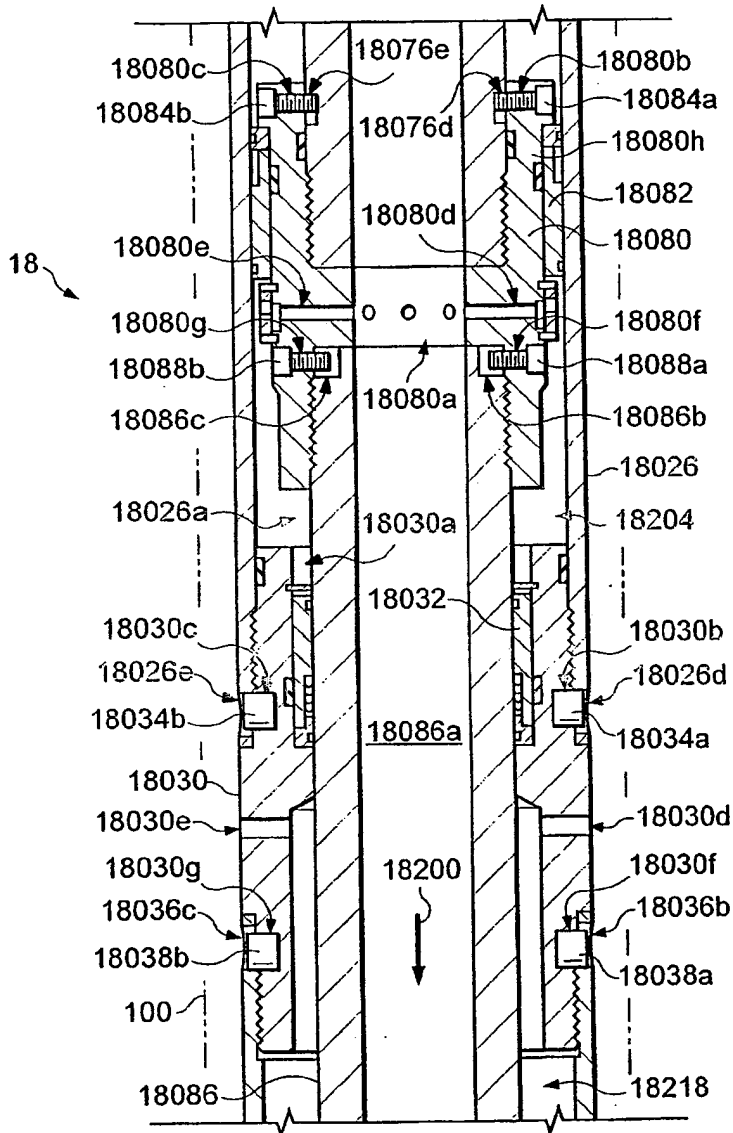


Fig. 13A4

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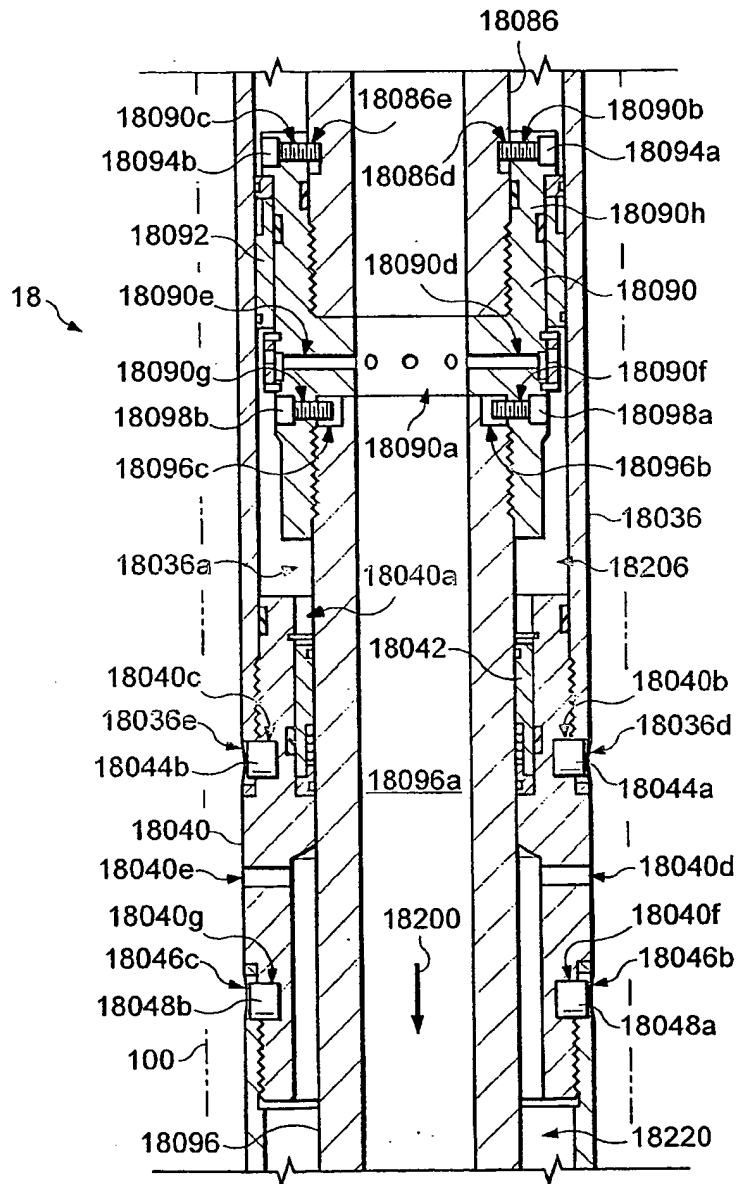
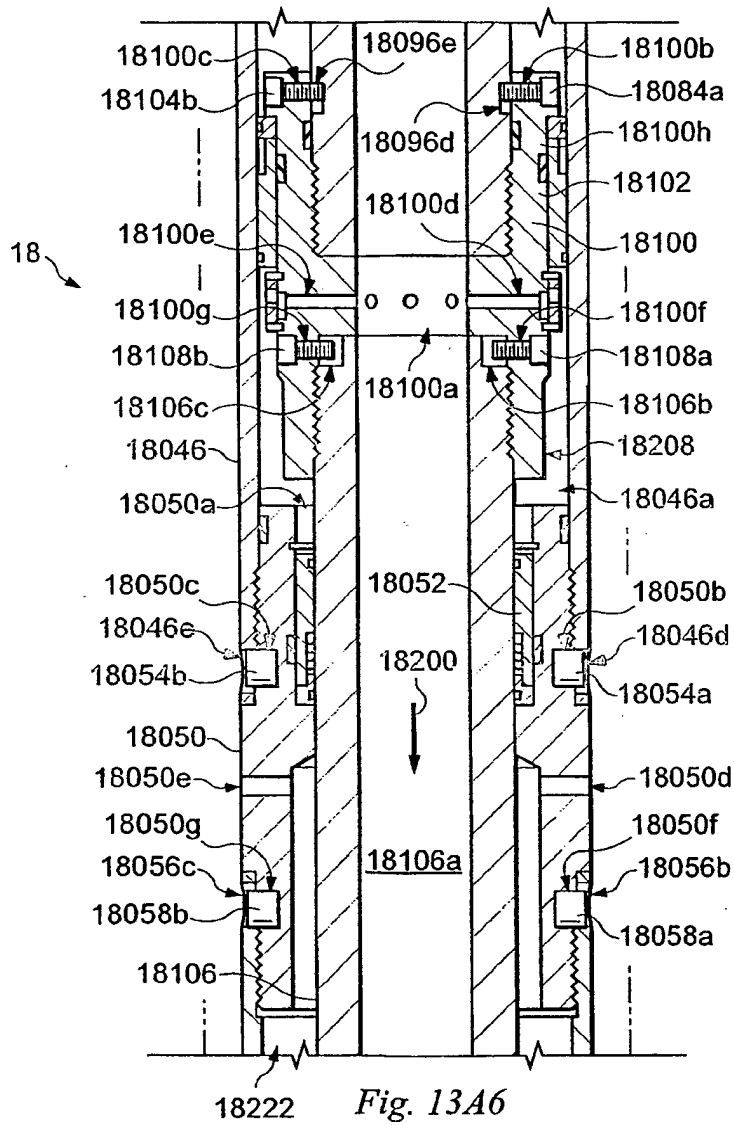
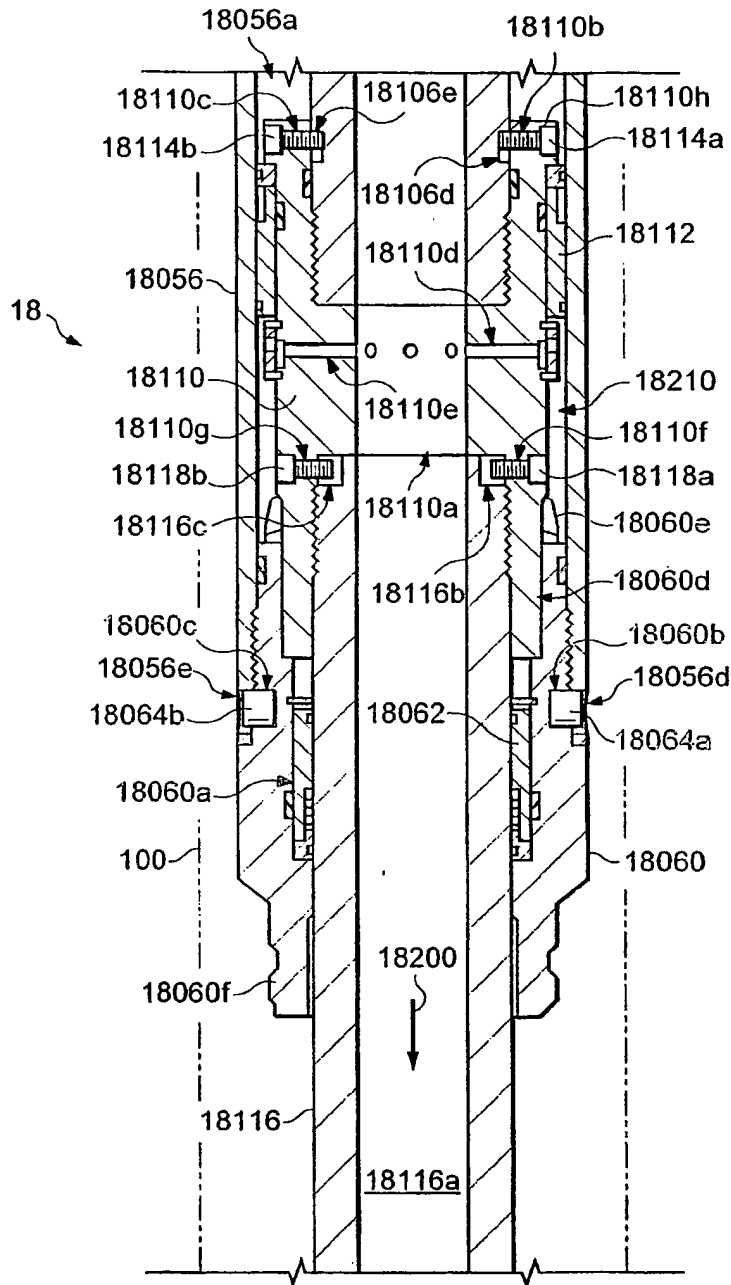


Fig. 13A5

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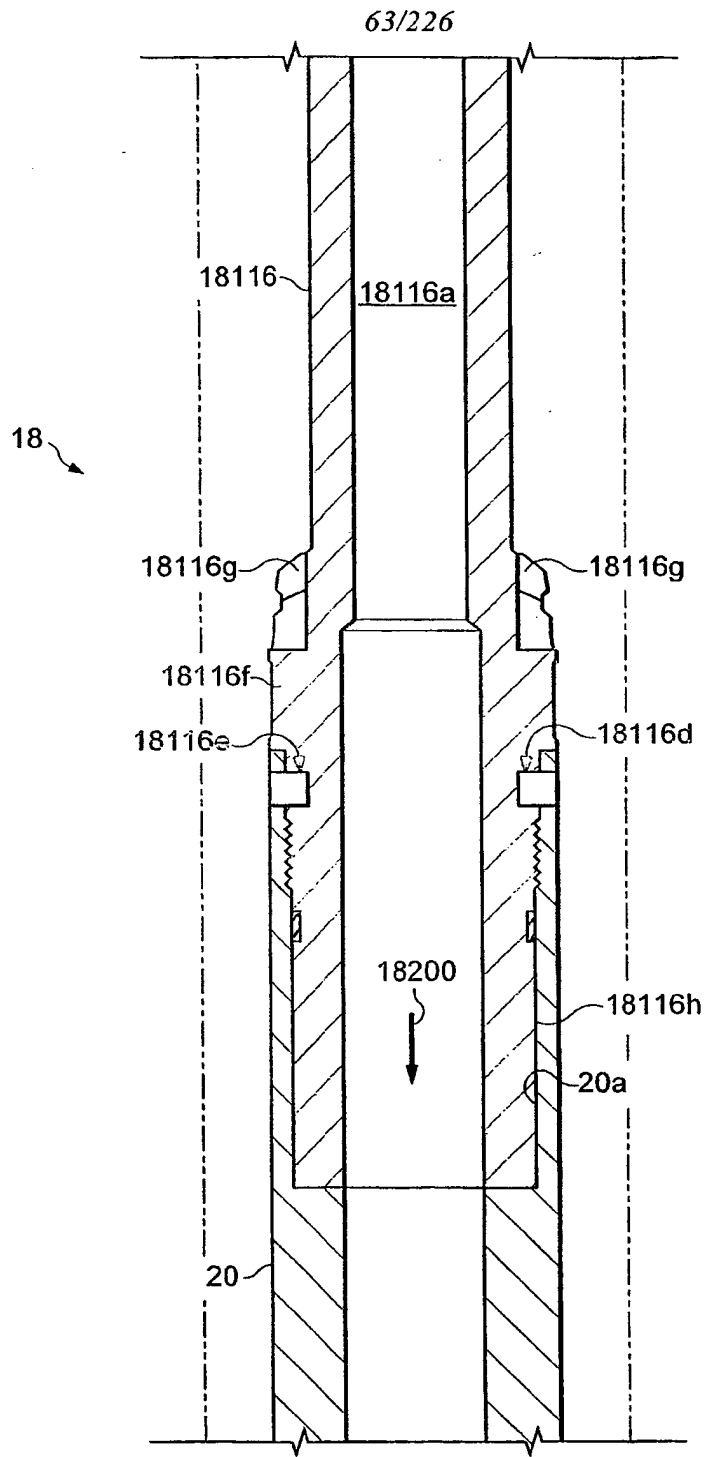


Fig. 13A8

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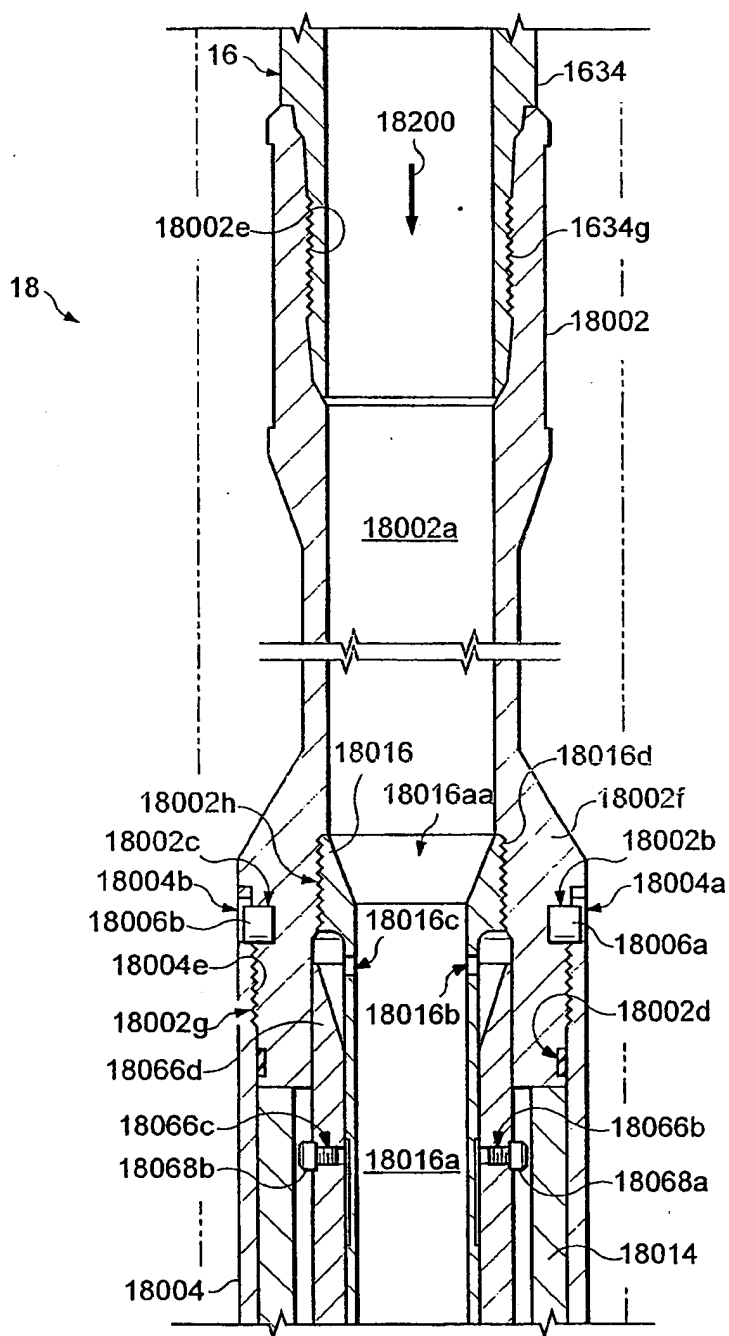
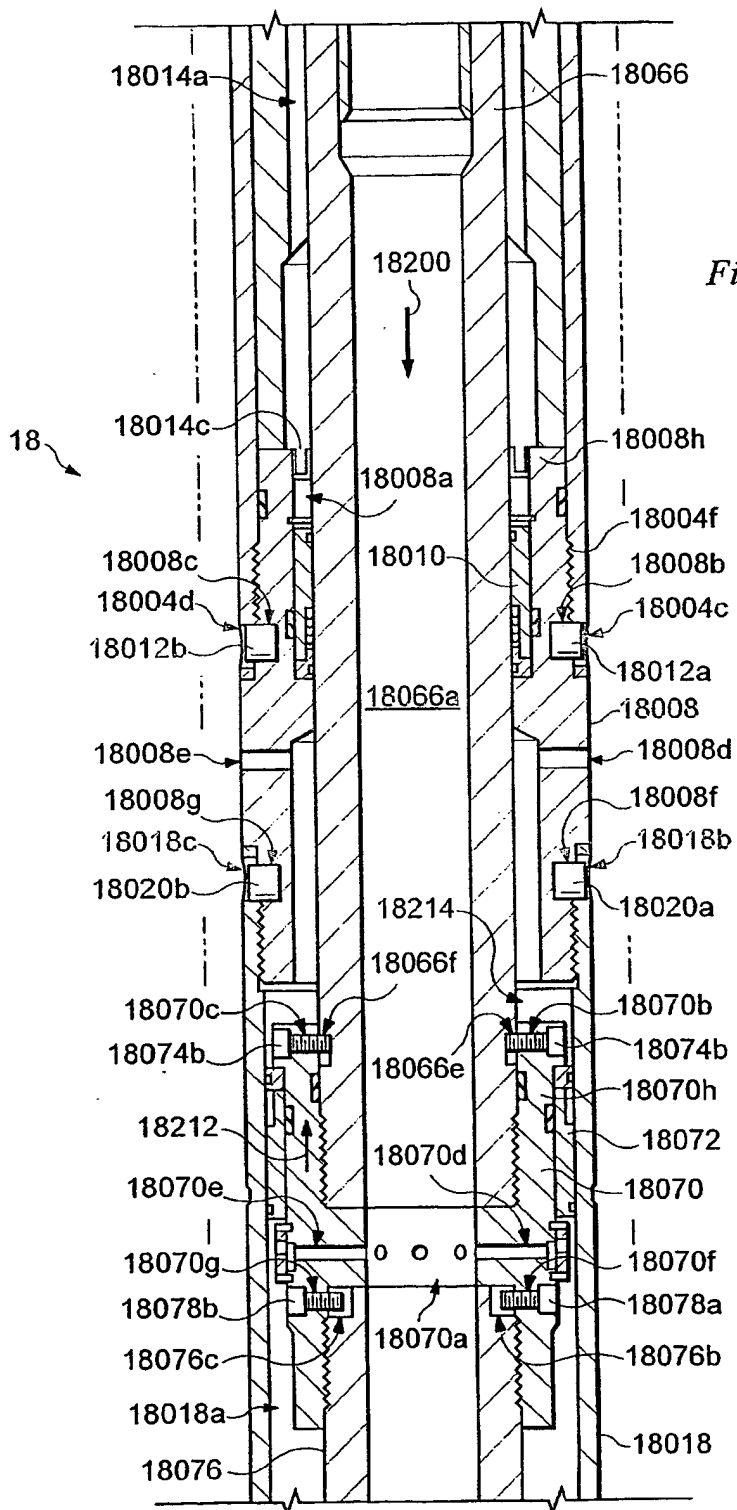
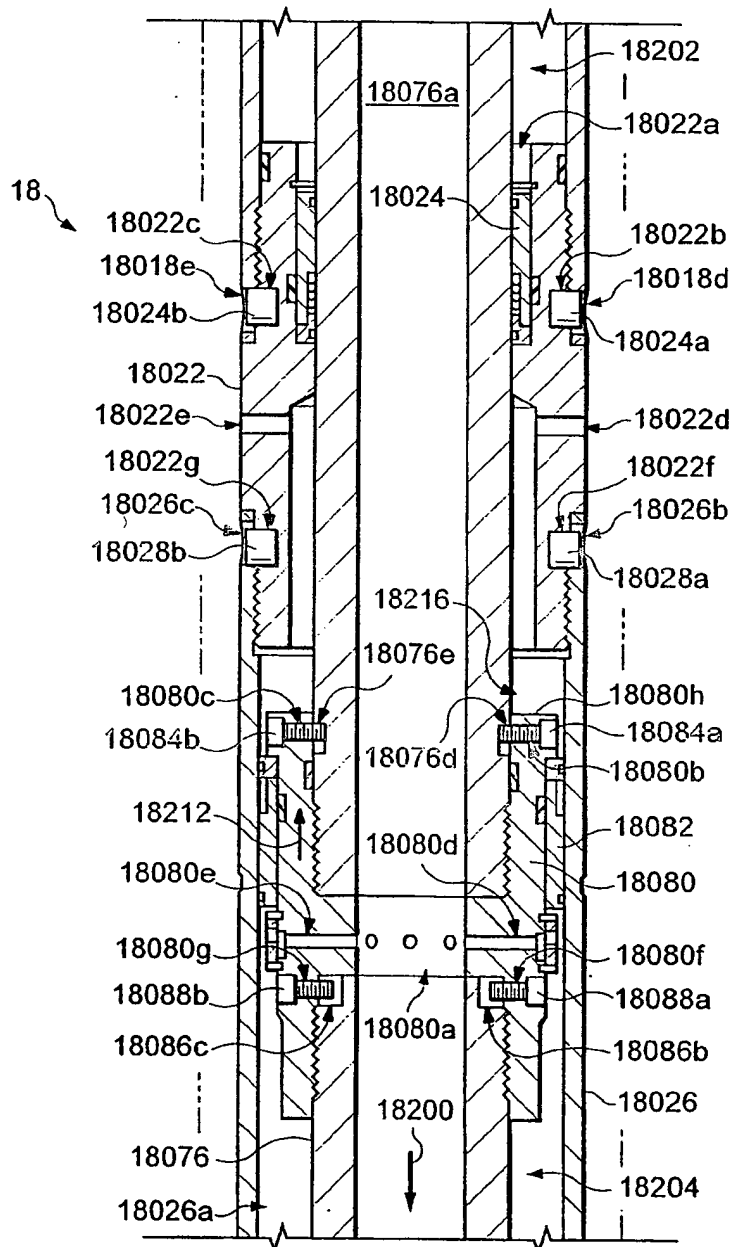


Fig. 13B1

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*Fig. 13B3*

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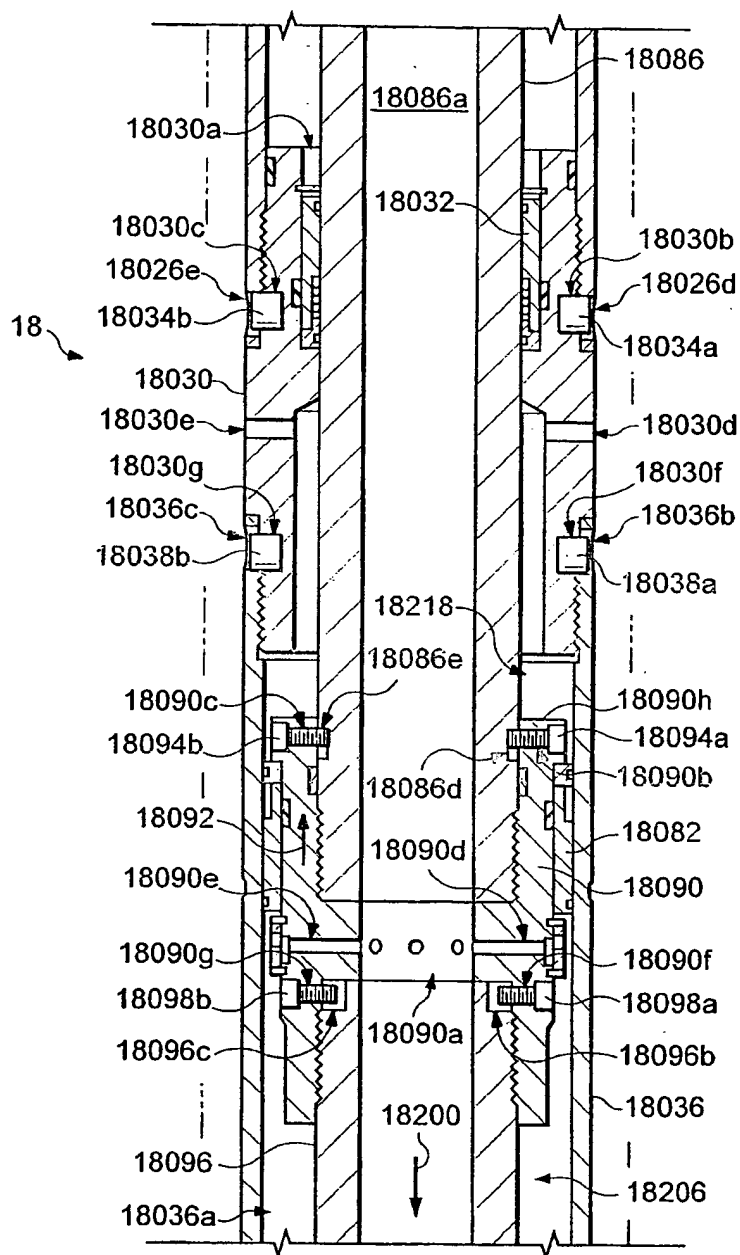


Fig. 13B4

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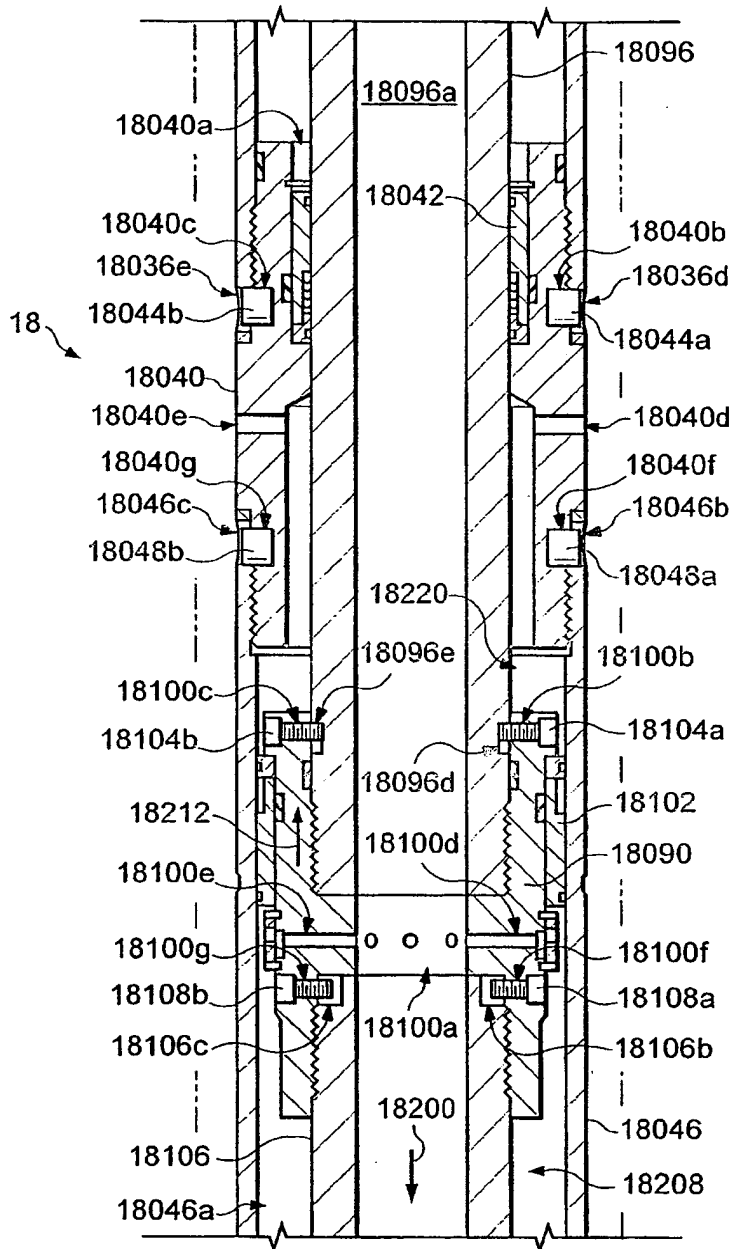
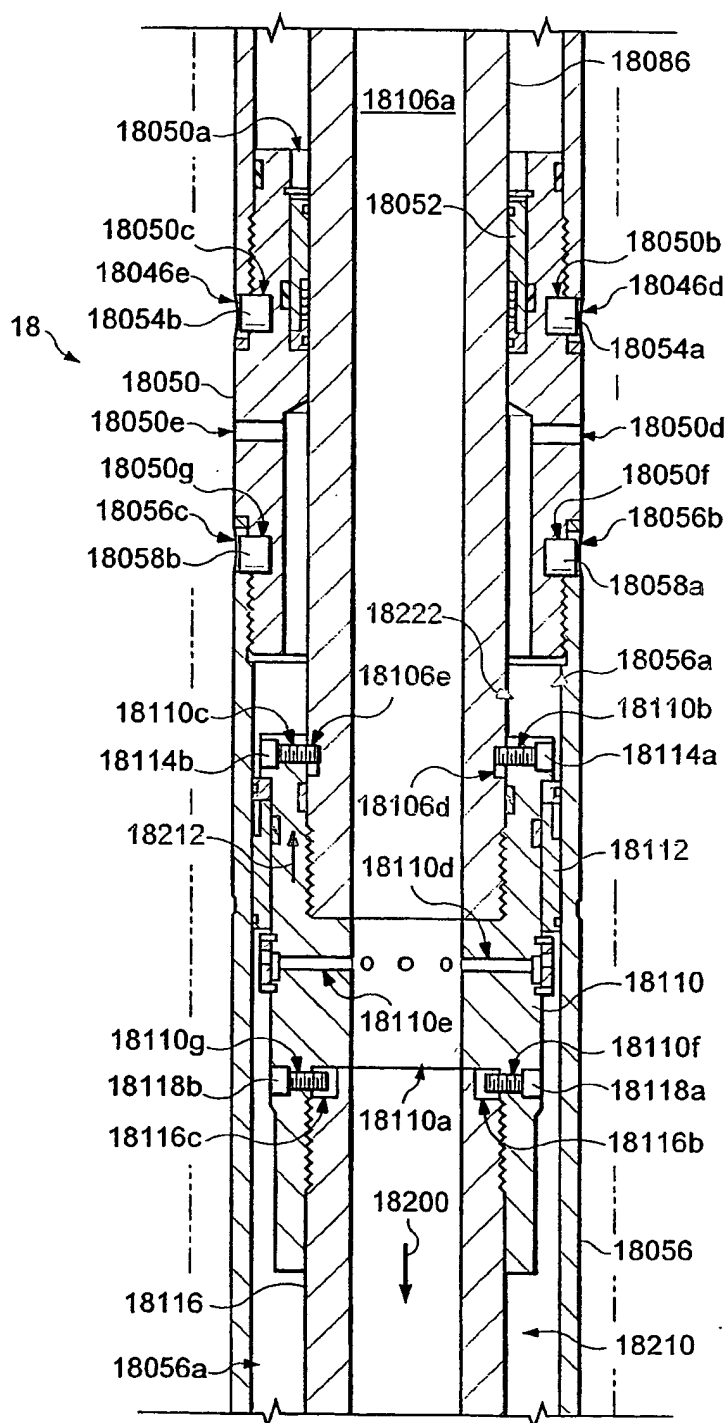


Fig. 13B5

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*Fig. 13B6*

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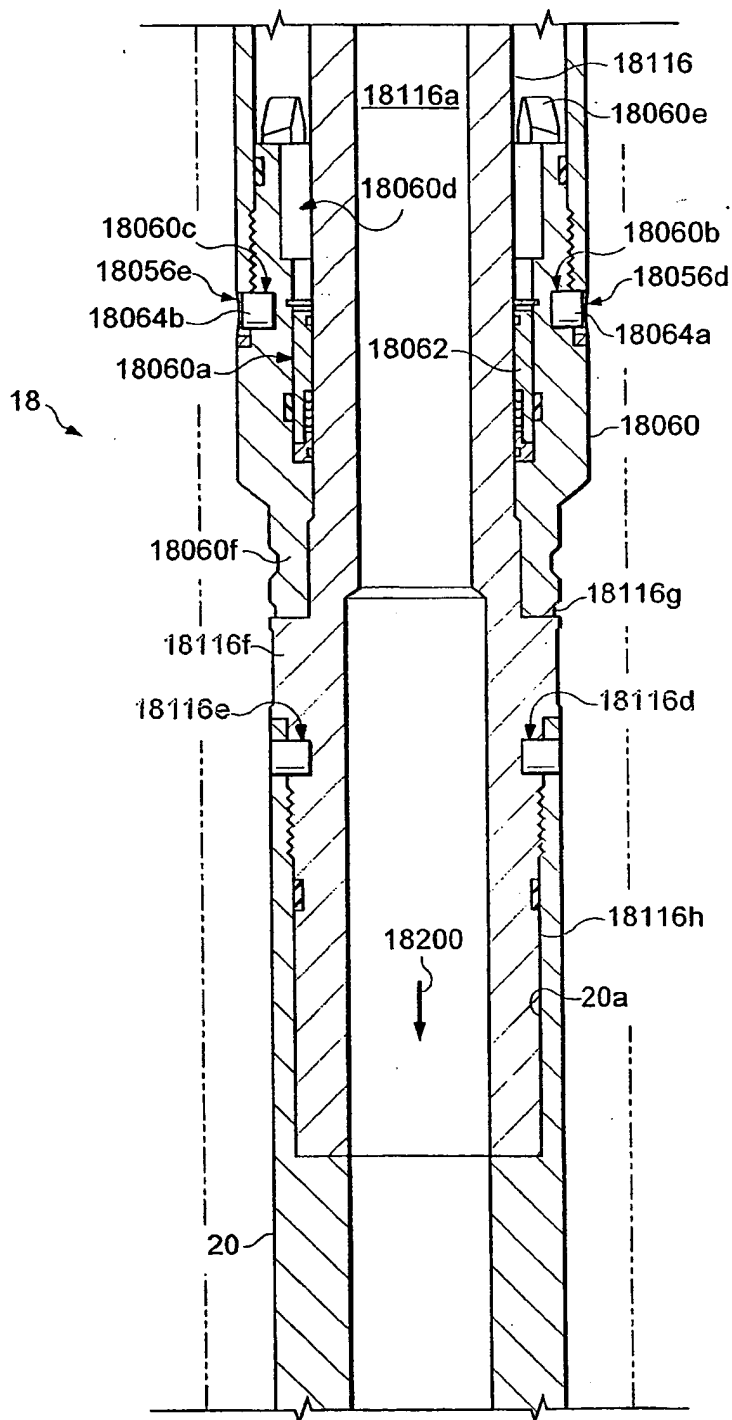


Fig. 13B7

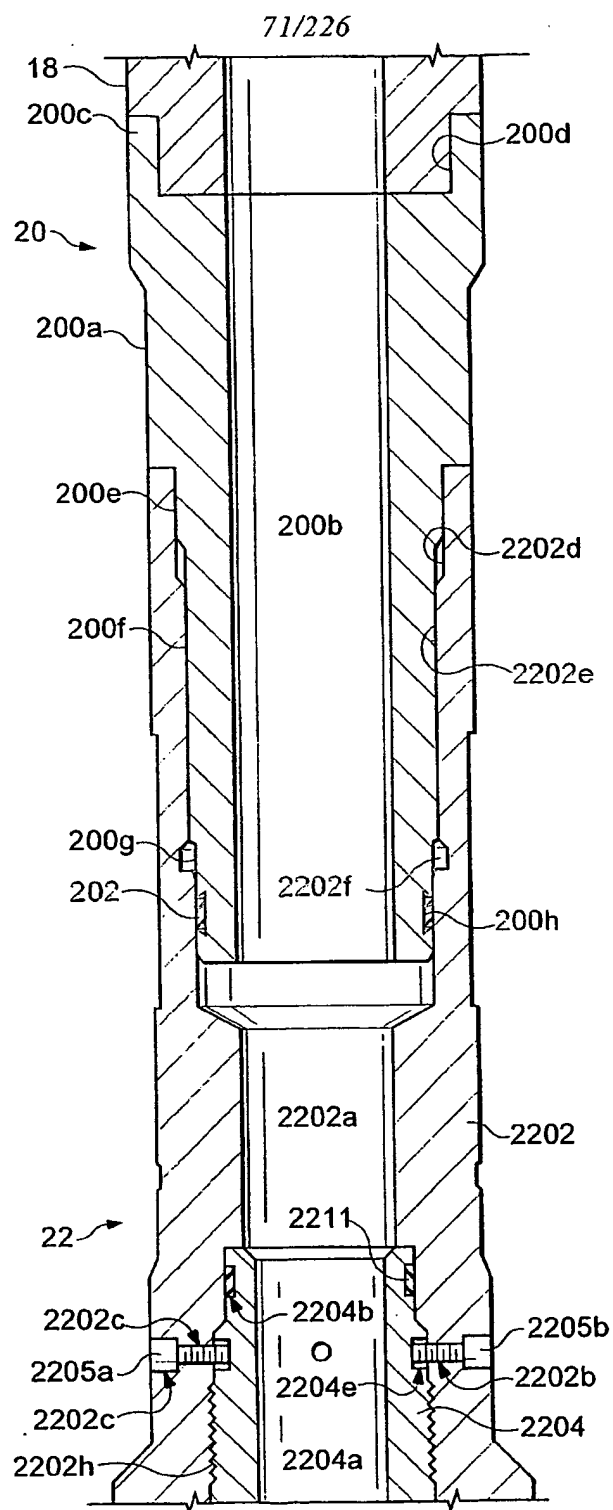
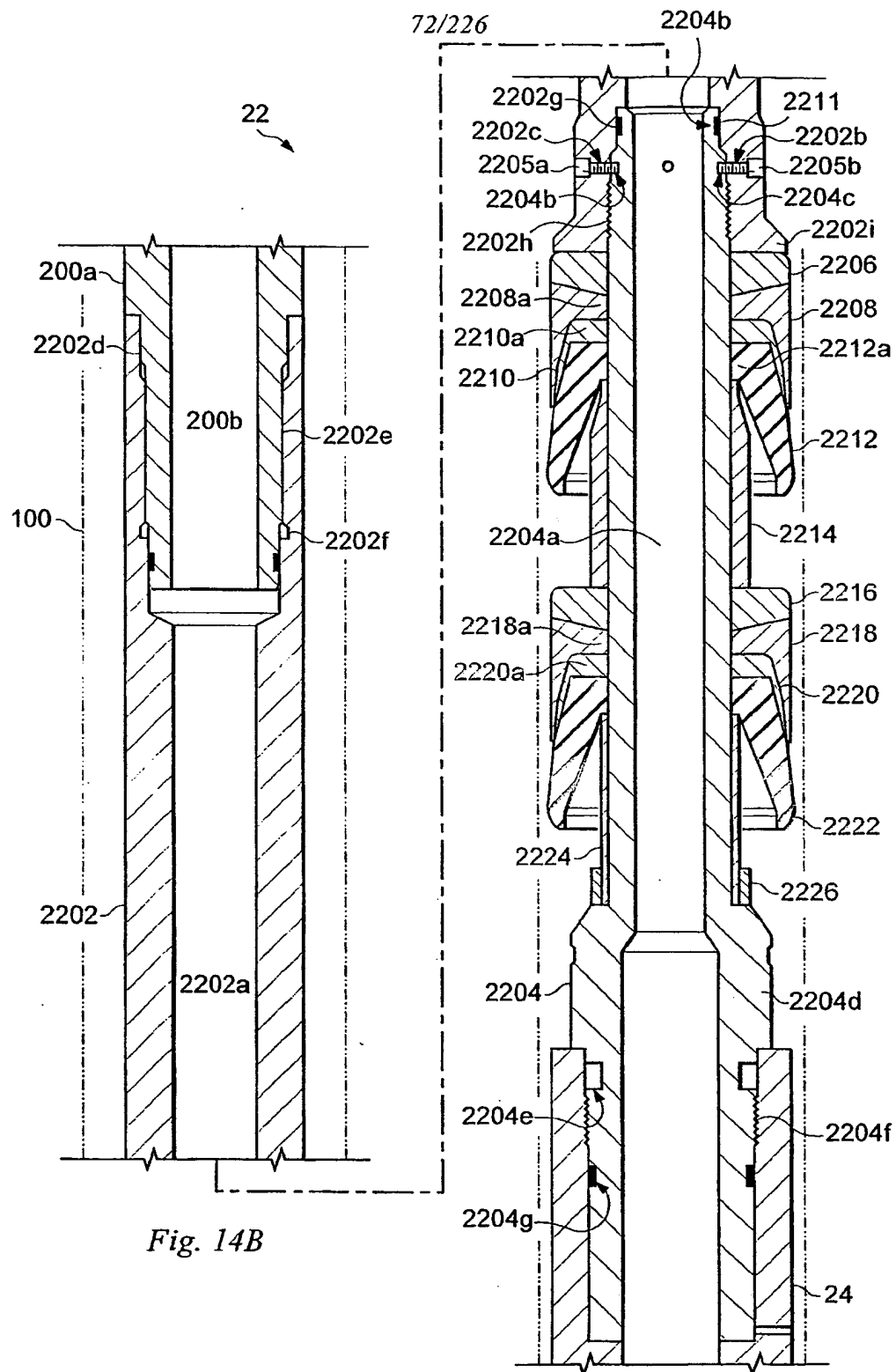


Fig. 14A



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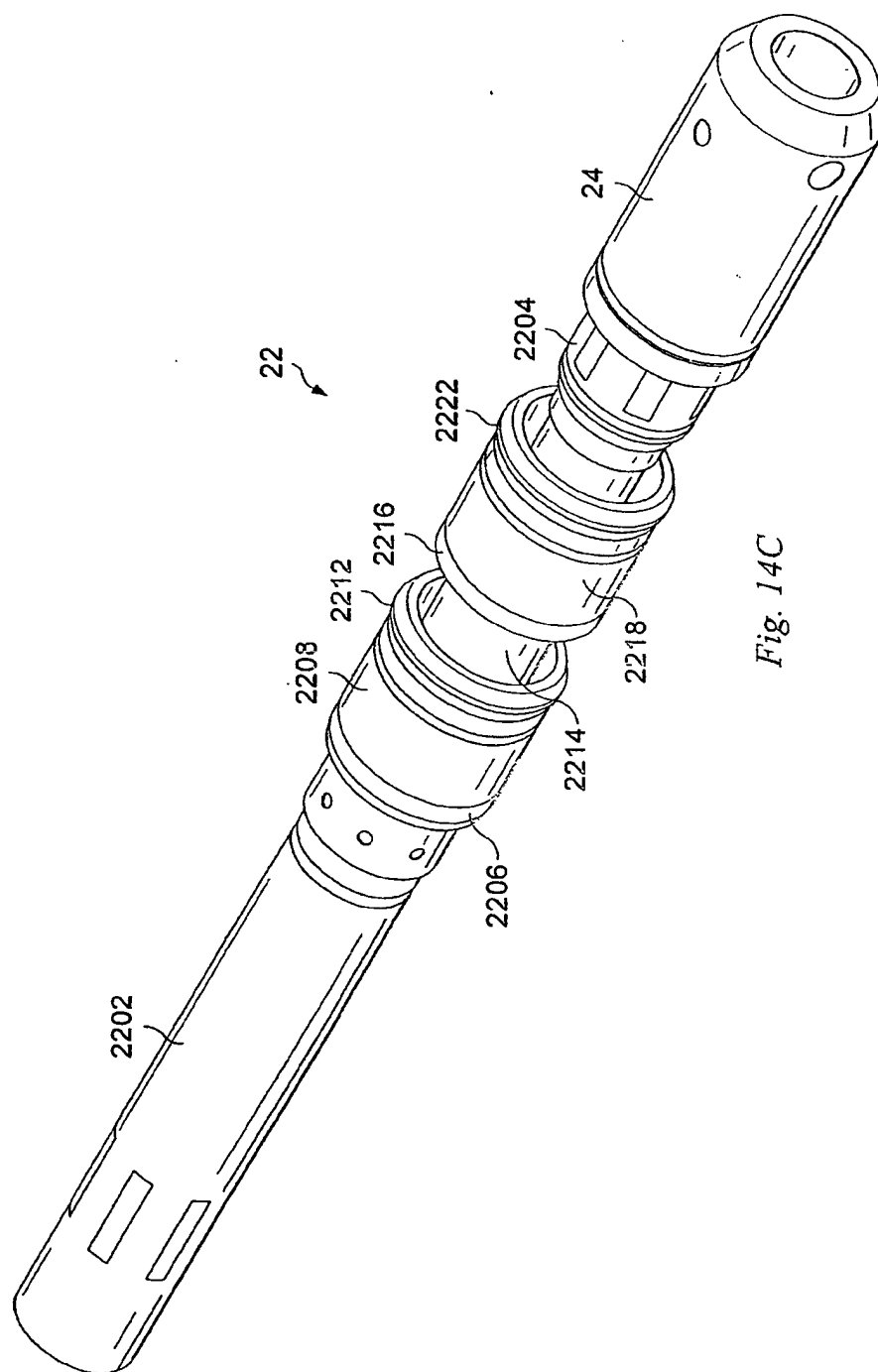
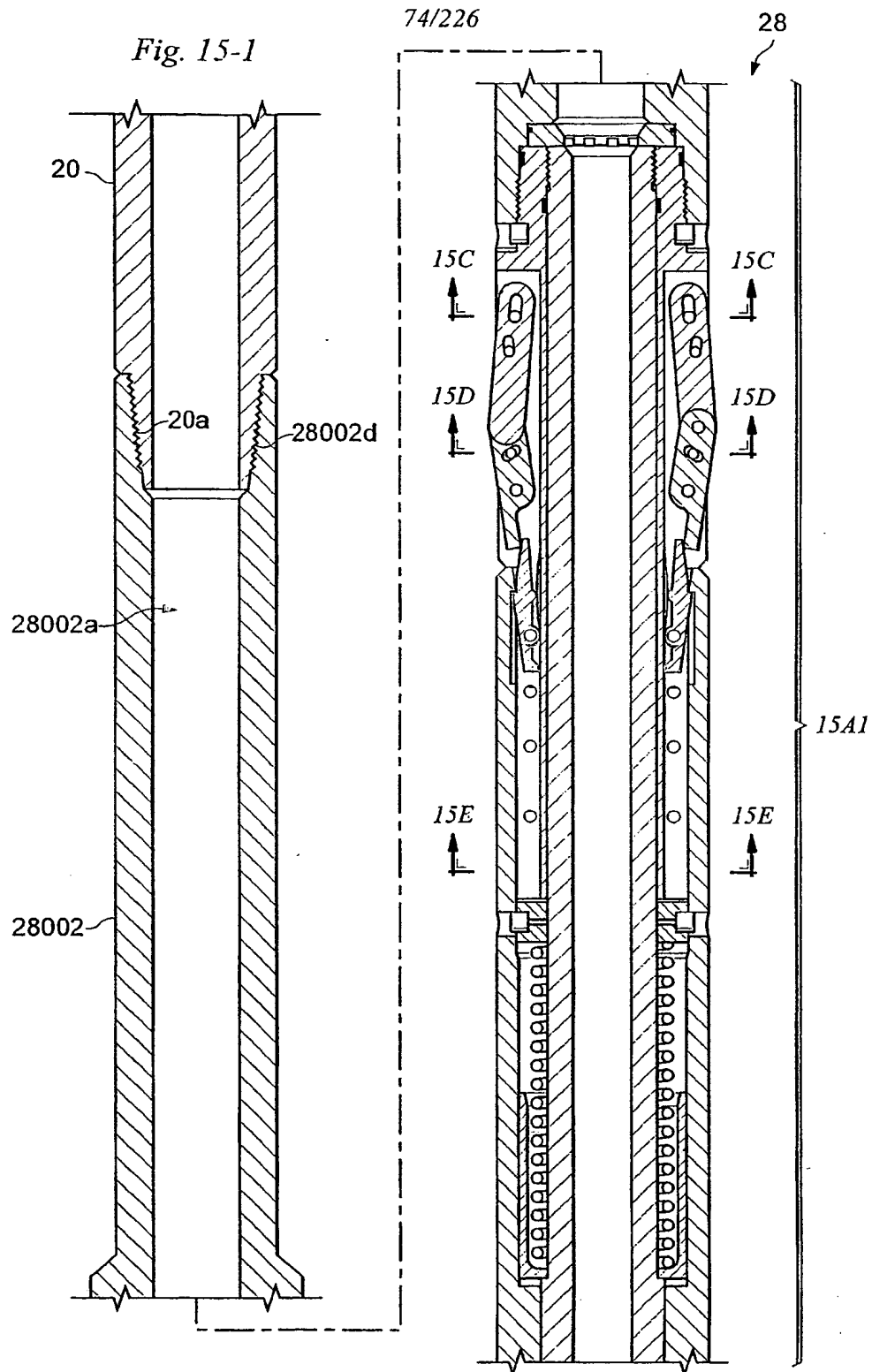


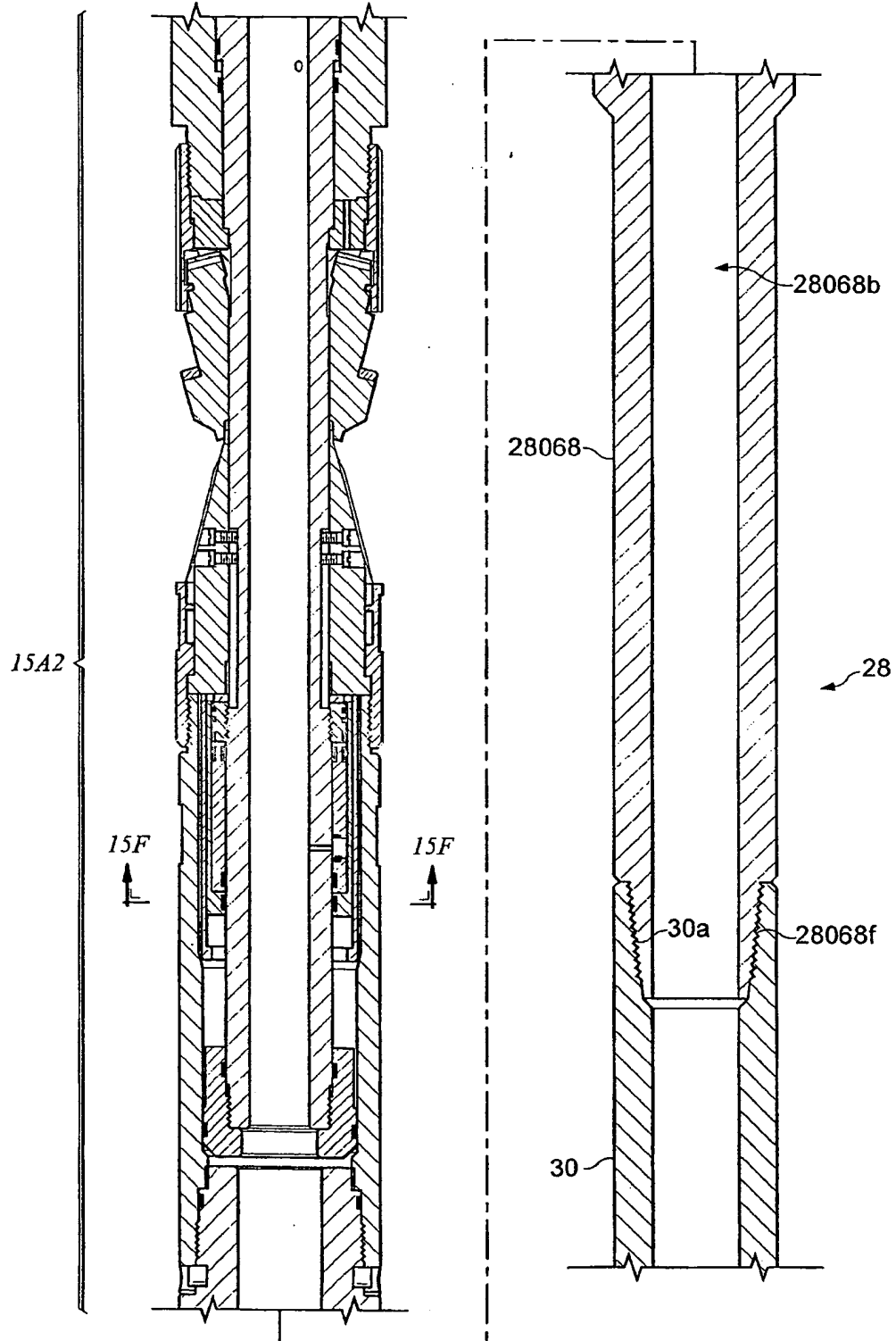
Fig. 14C

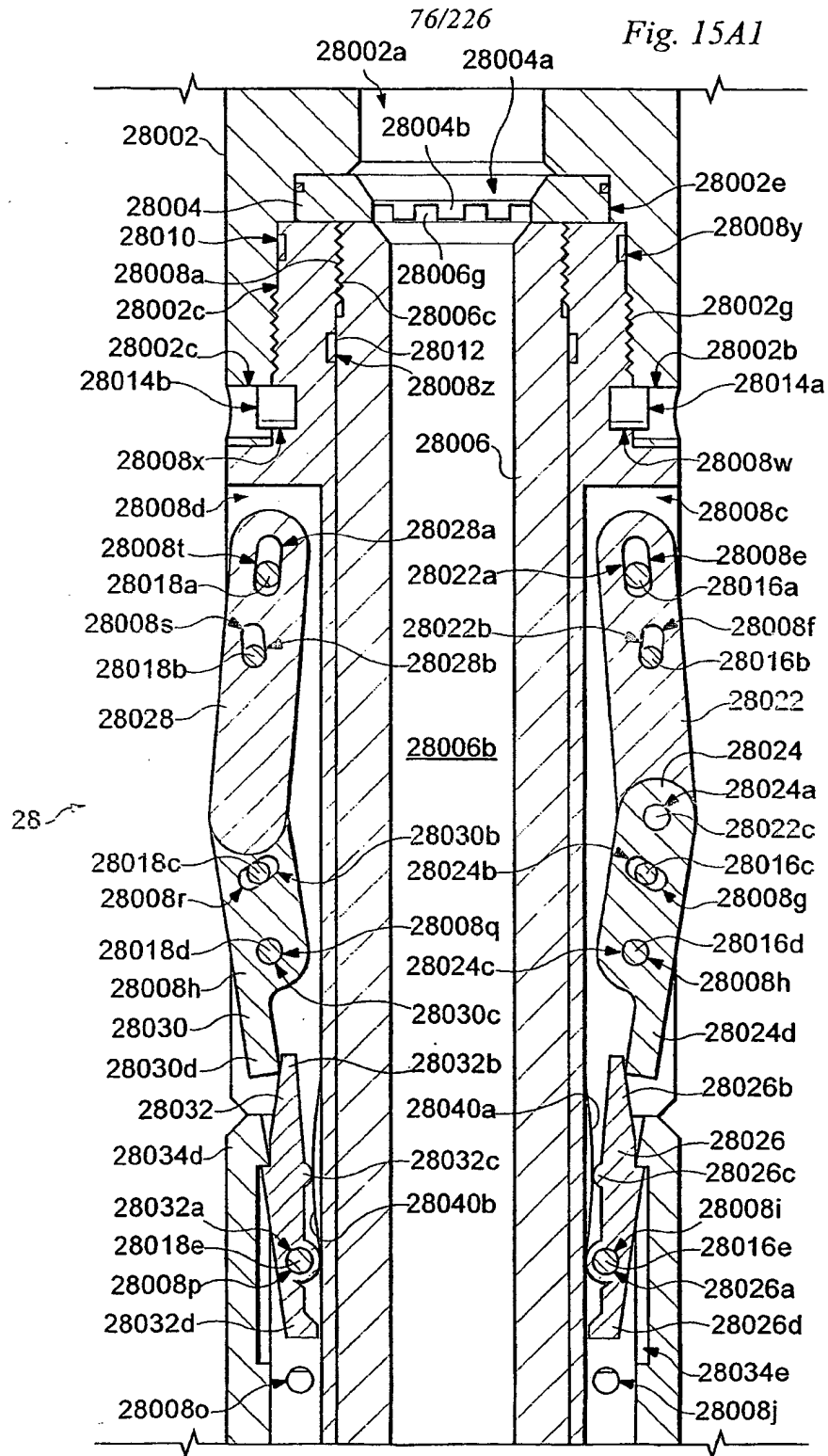
Fig. 15-1

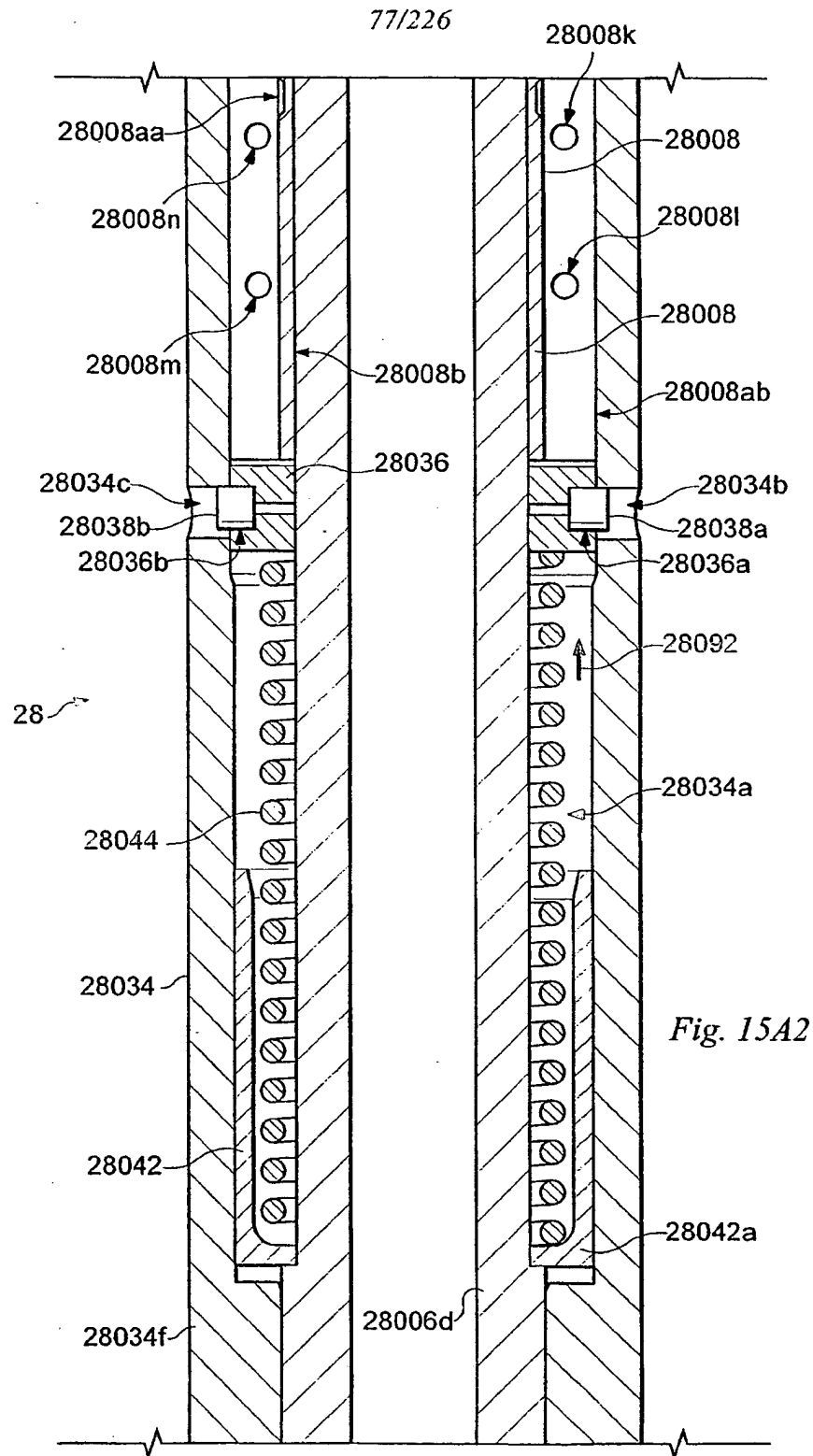


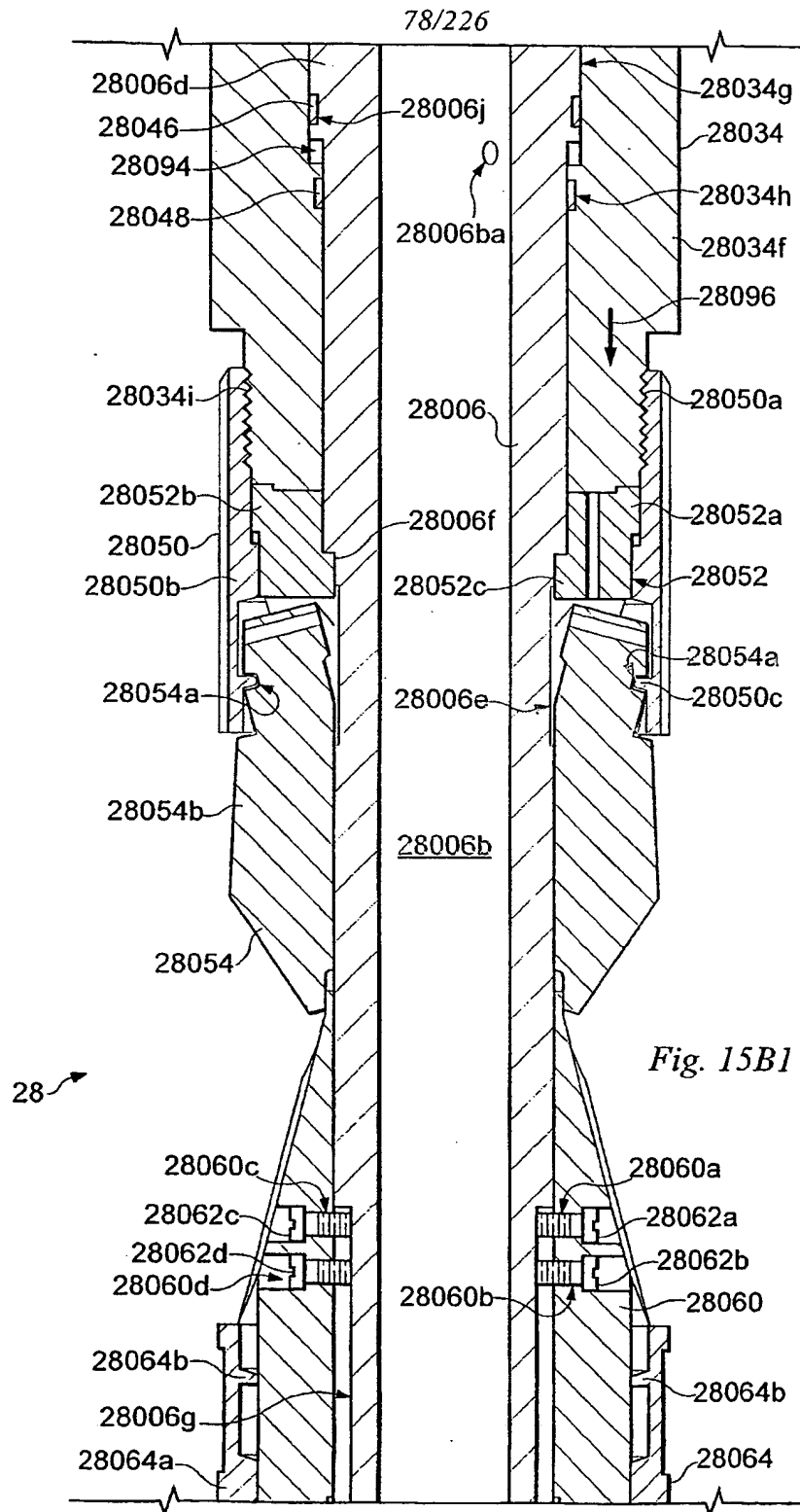
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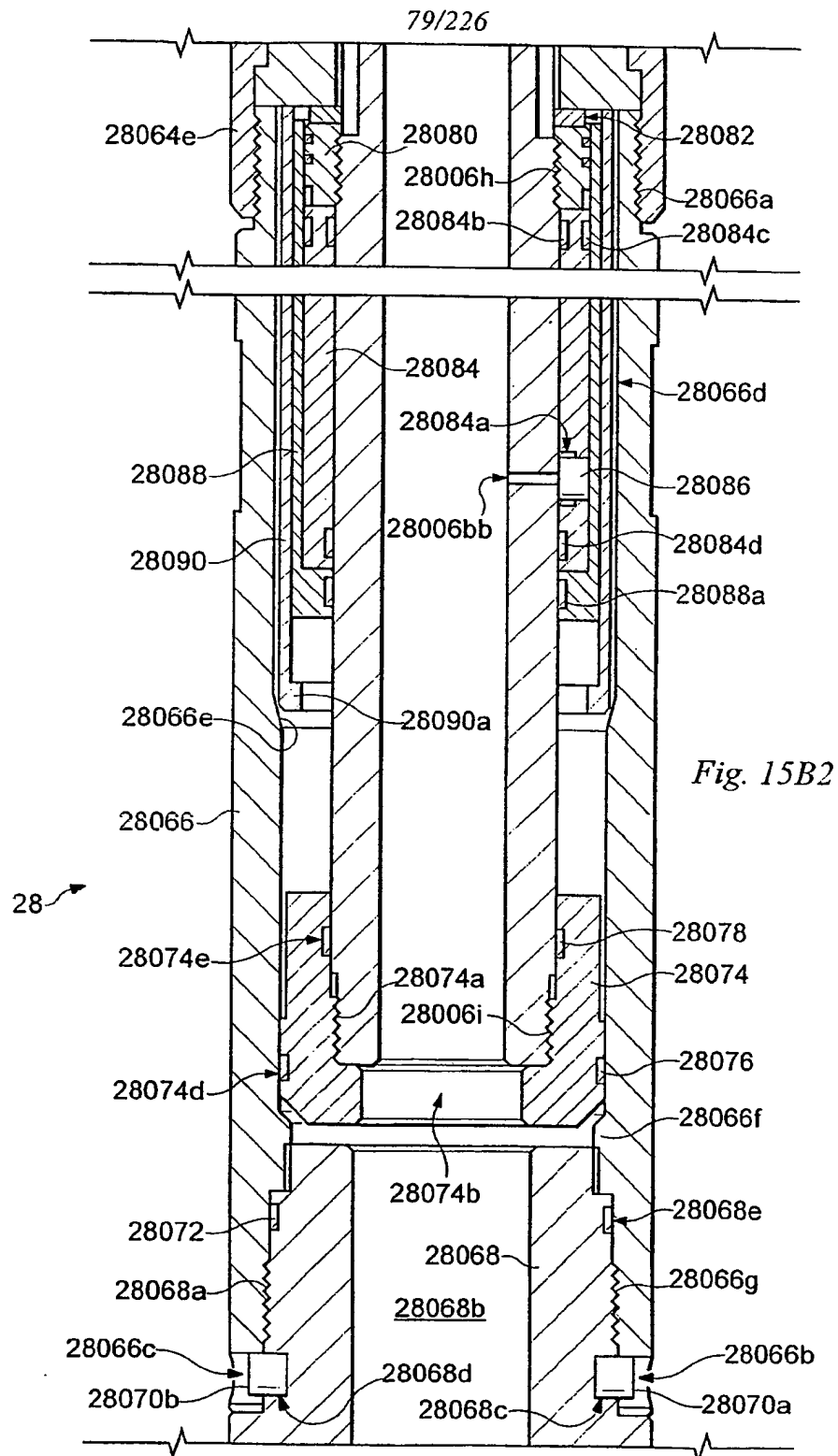
Fig. 15-2











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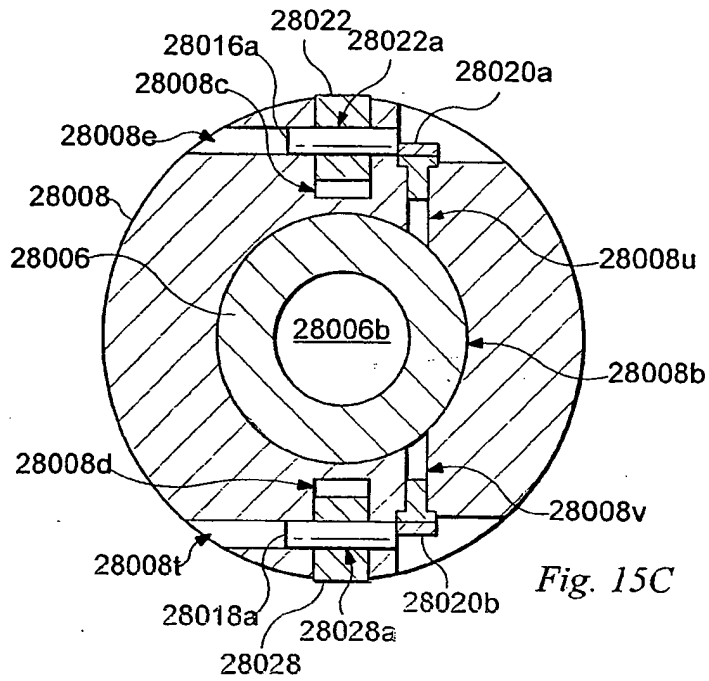


Fig. 15C

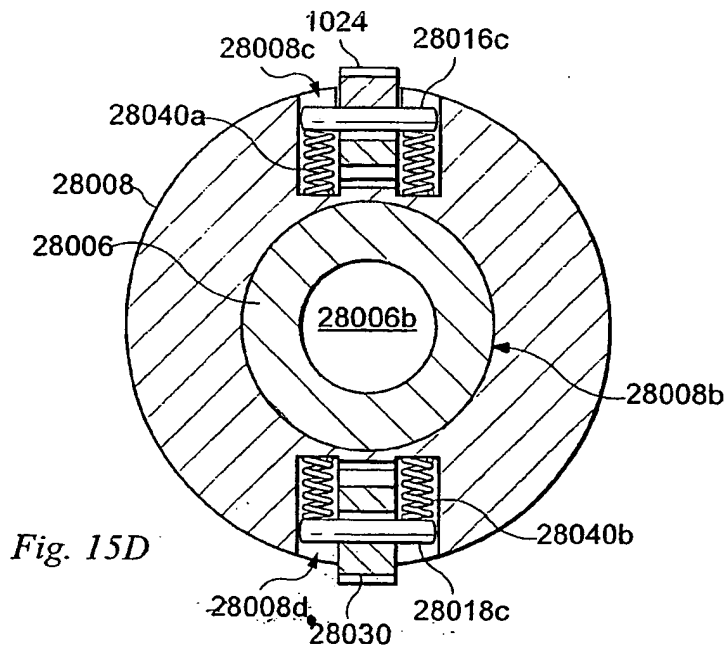


Fig. 15D

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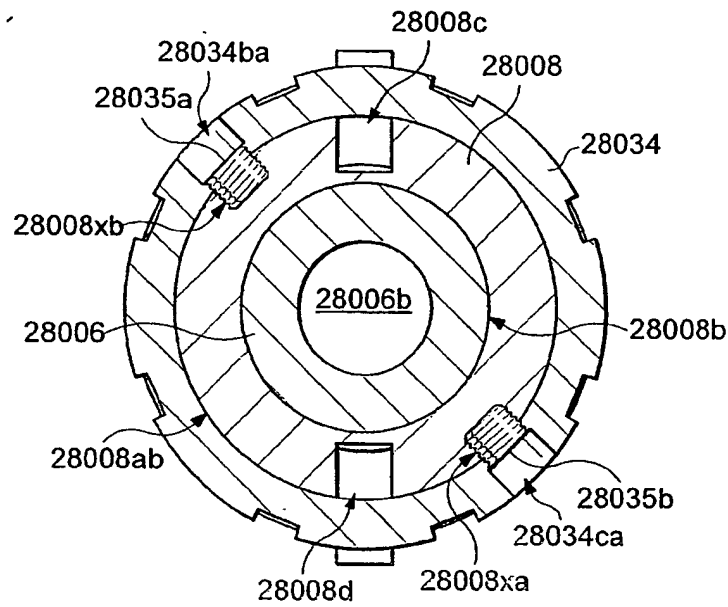


Fig. 15E

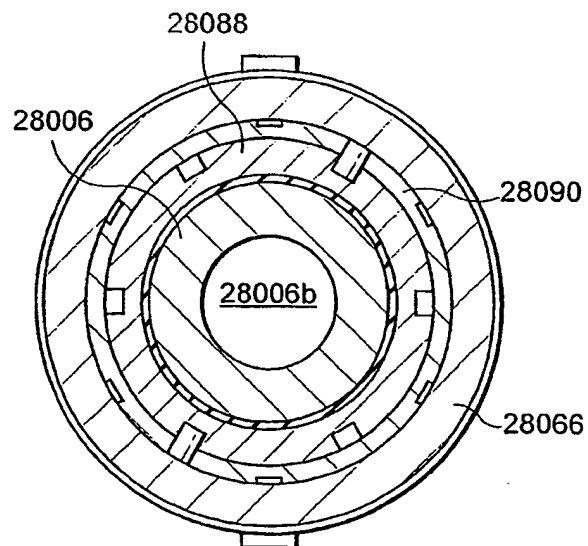


Fig. 15F

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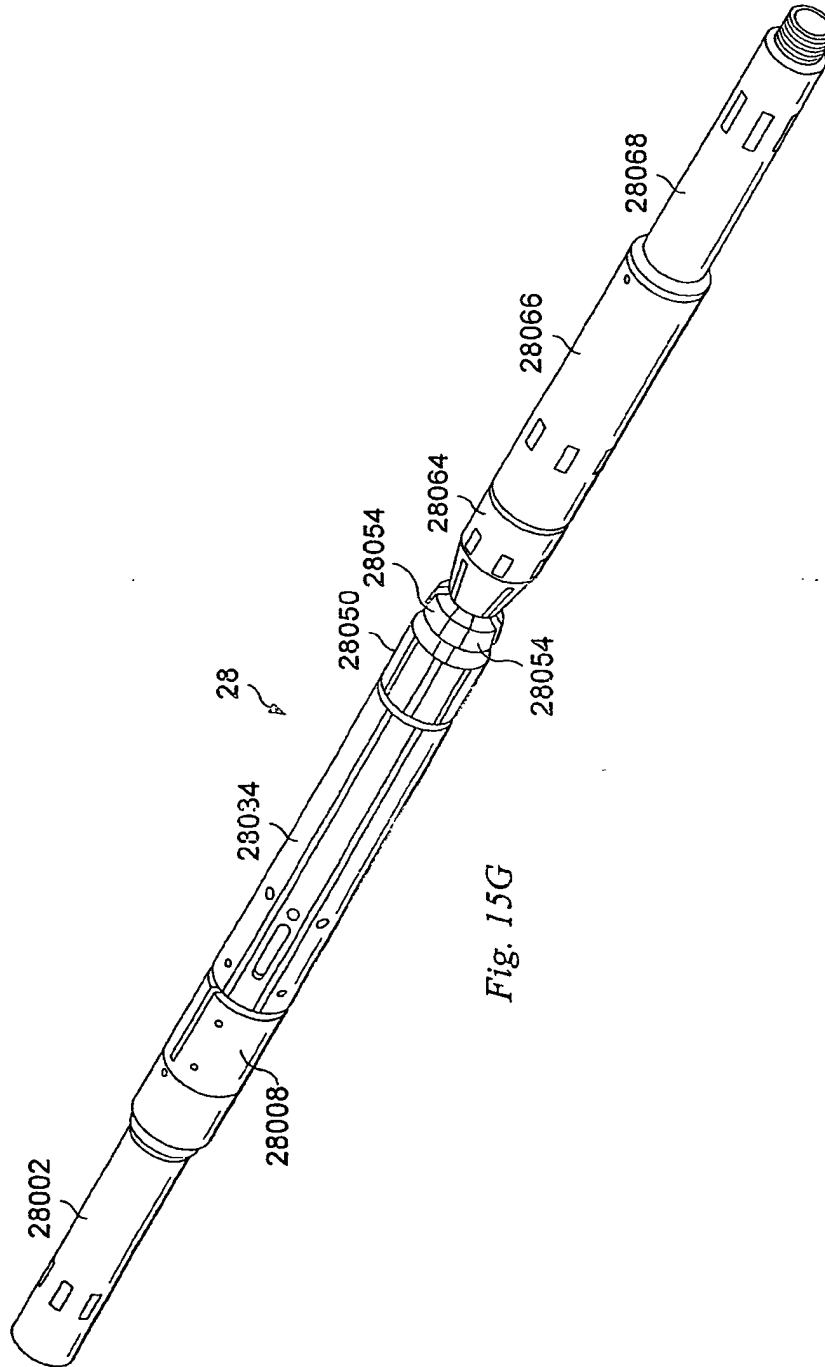


Fig. 15G

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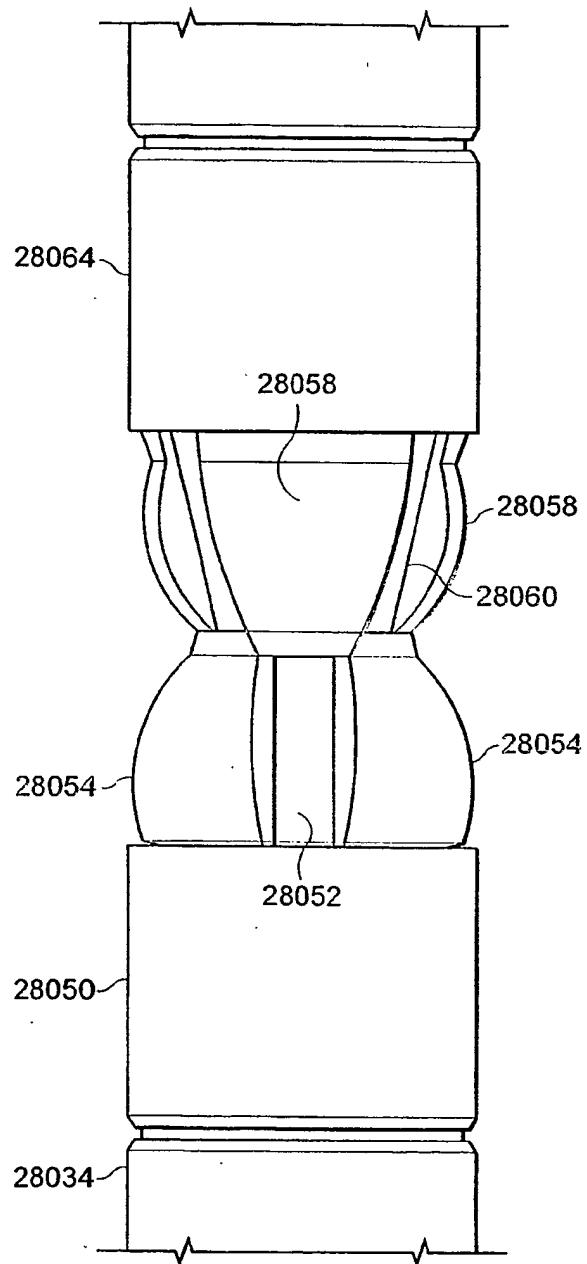


Fig. 15H

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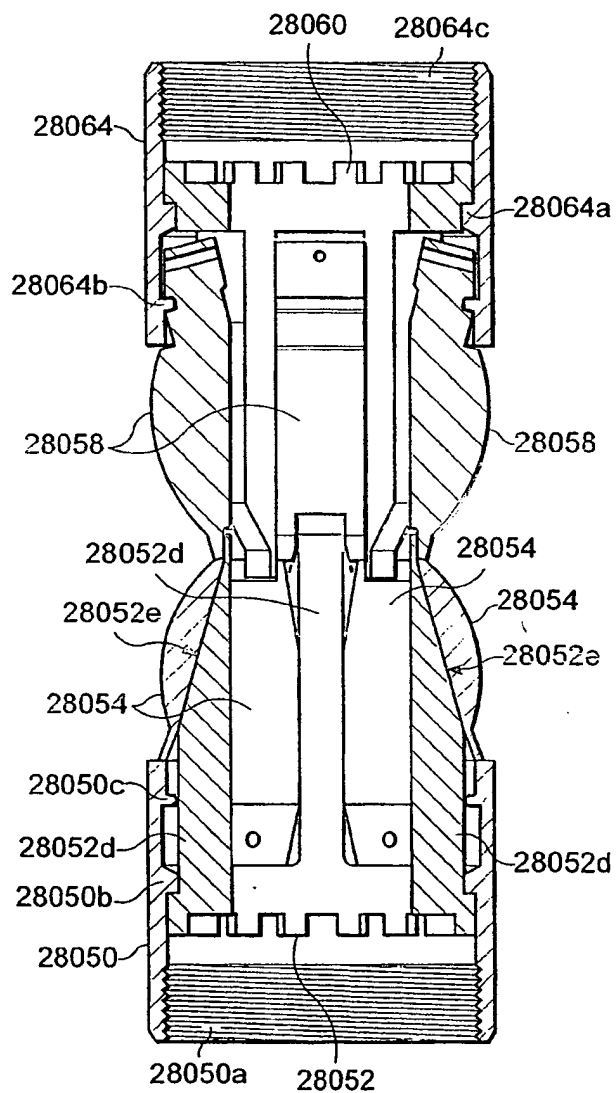
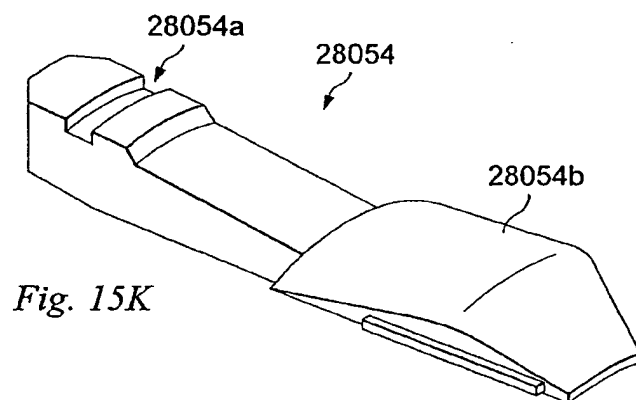
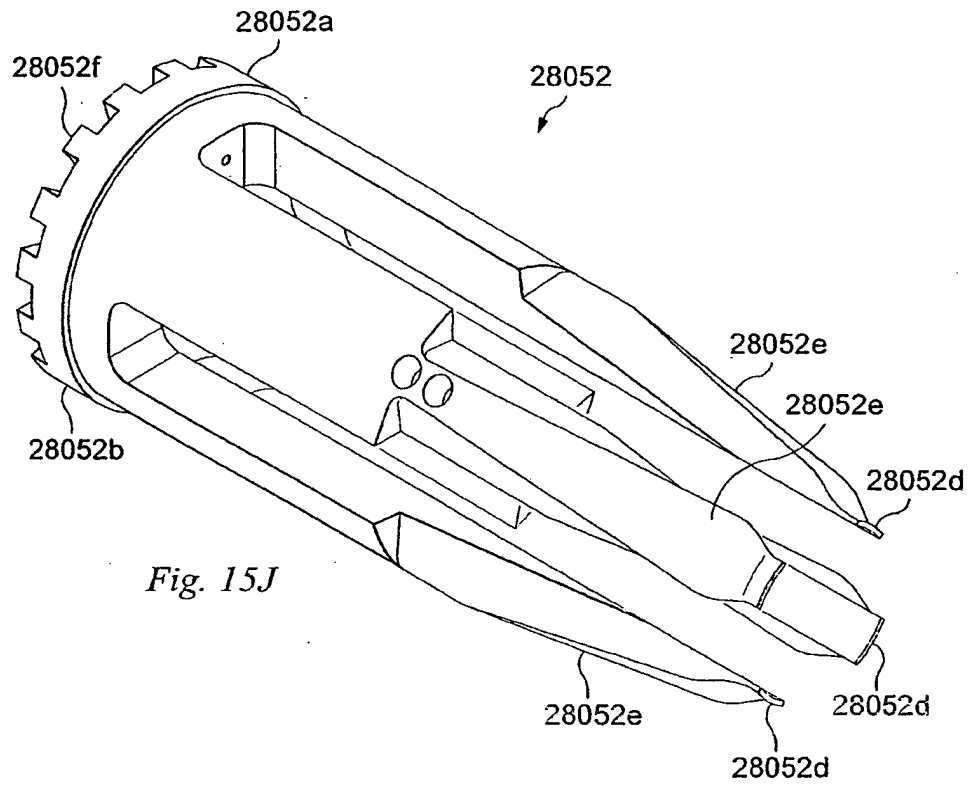


FIG. 15I

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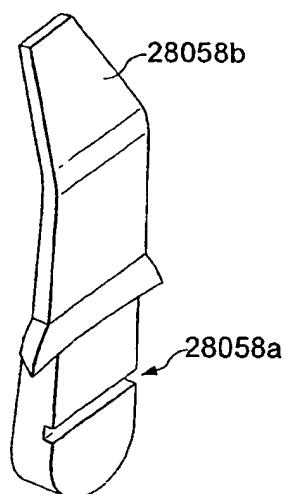


Fig. 15L

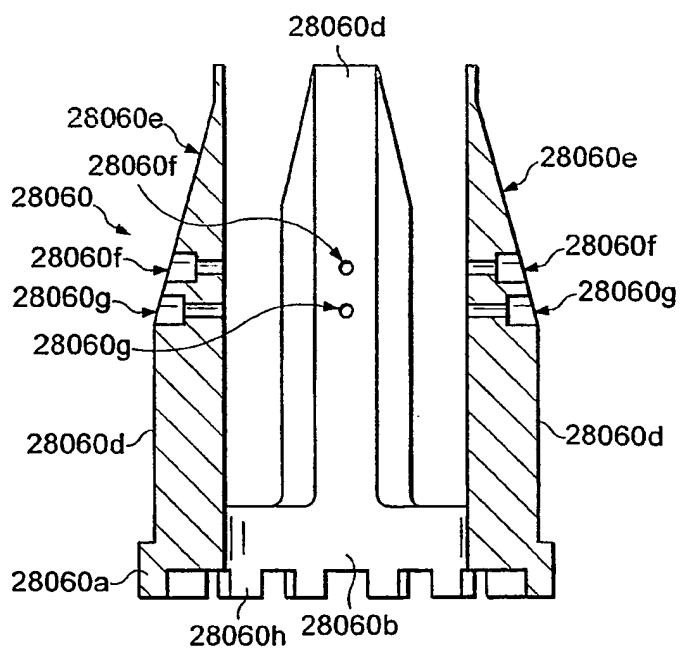


Fig. 15M

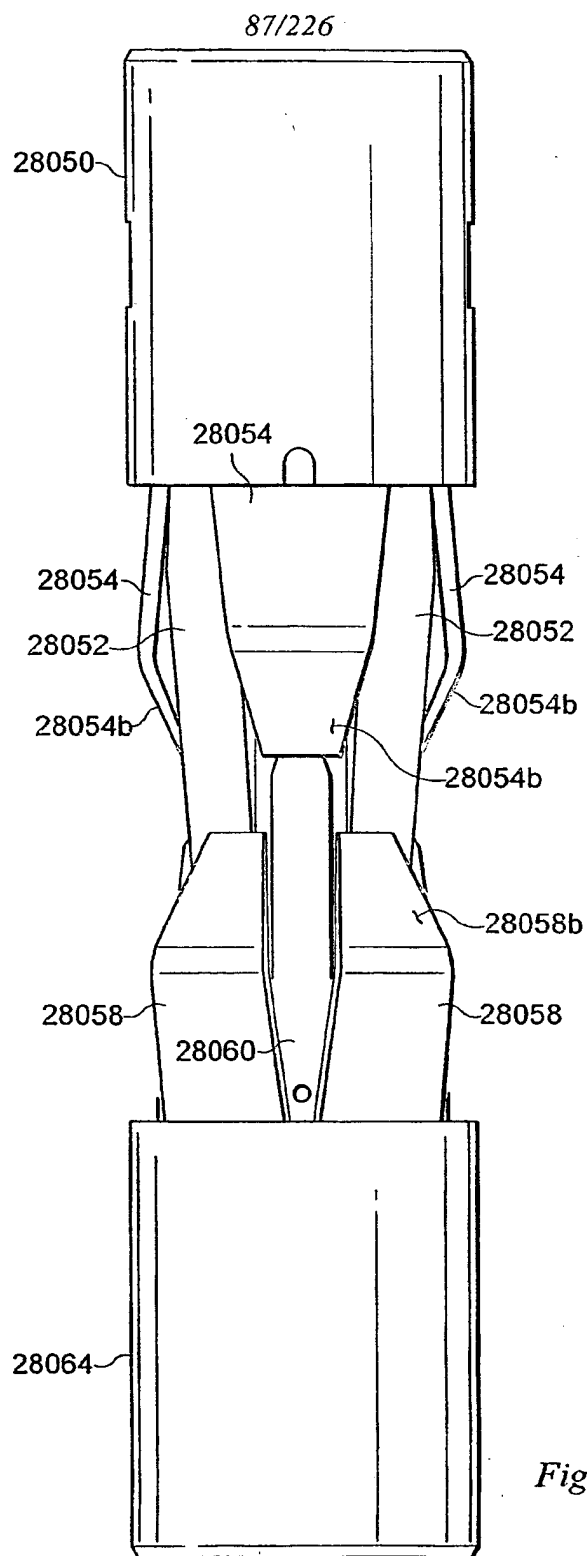
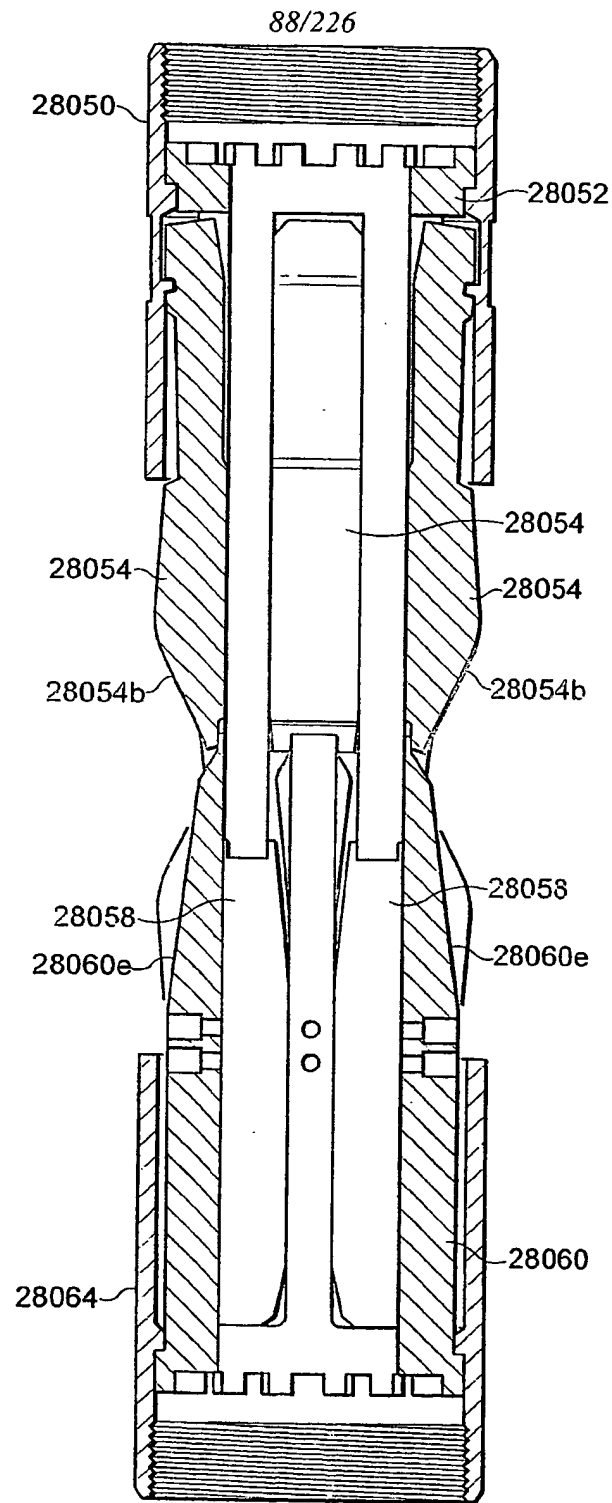
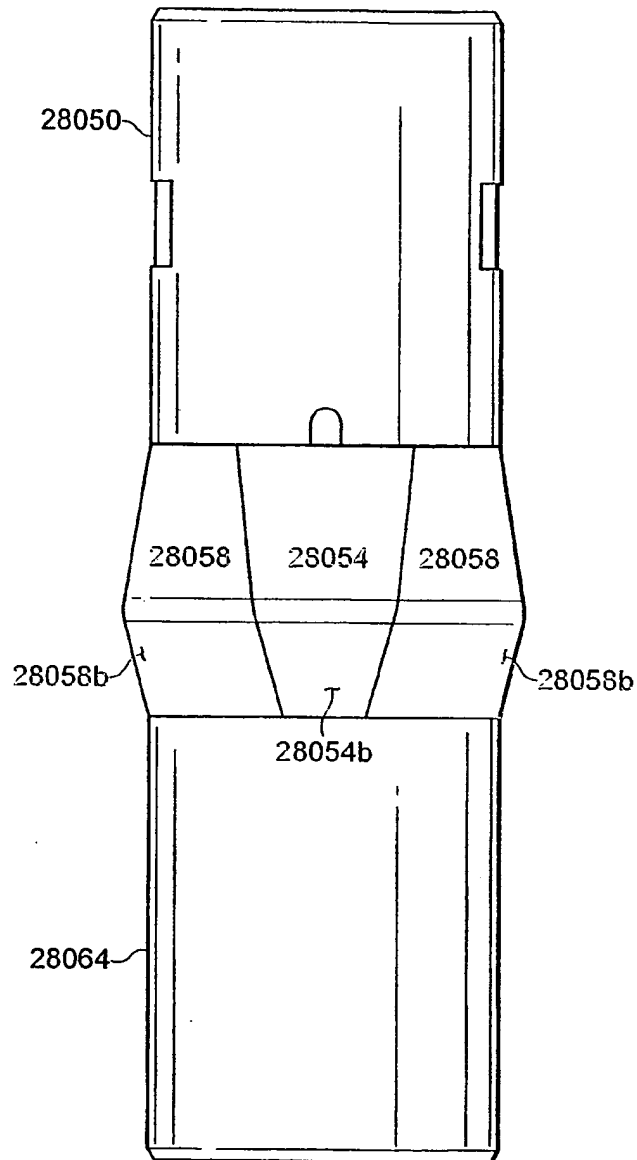


Fig. 15N

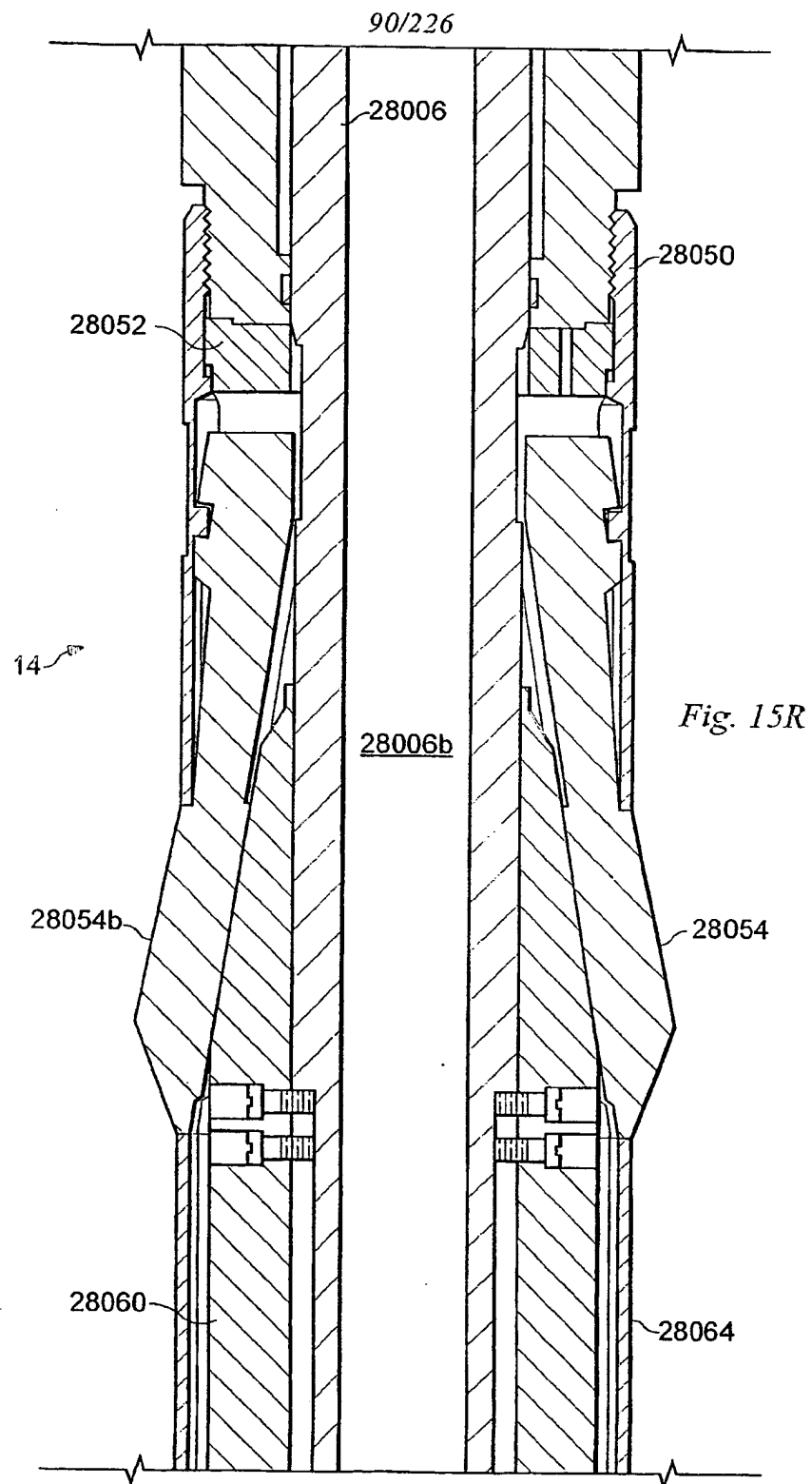


*Fig. 150*

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*Fig. 15P*



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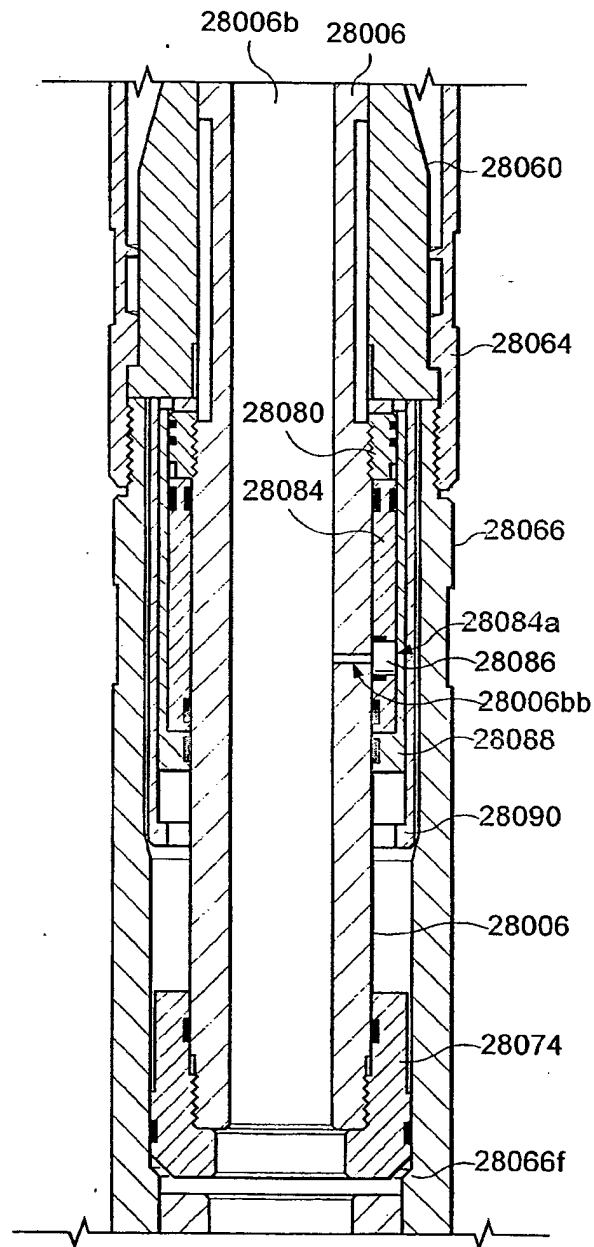


Fig. 15S

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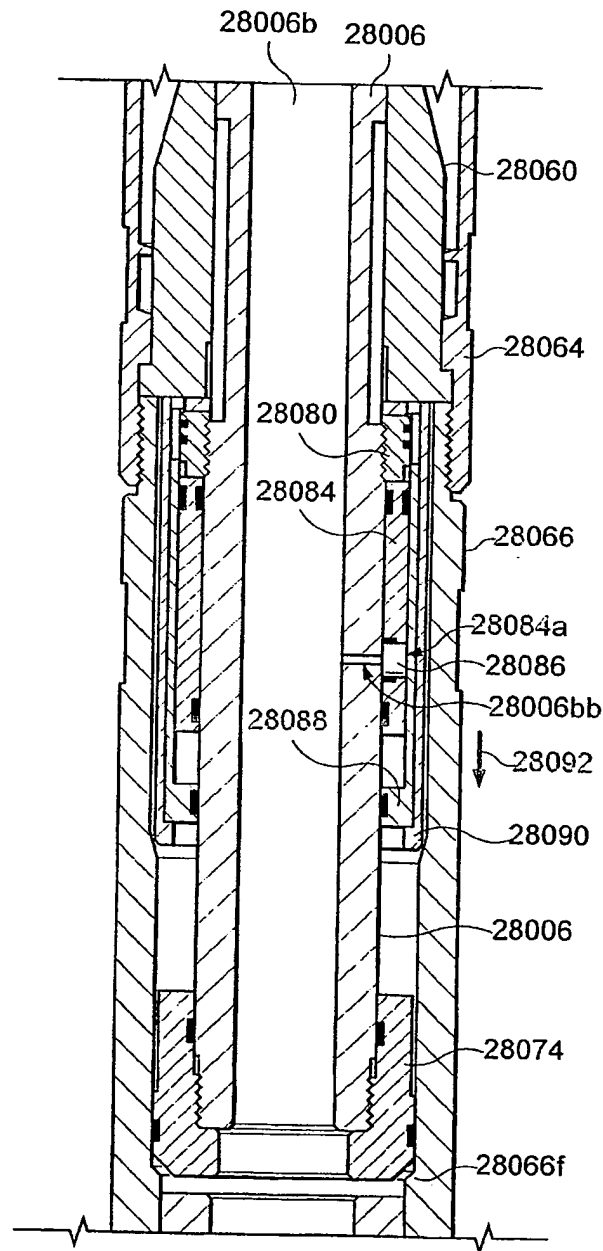


Fig. 15T

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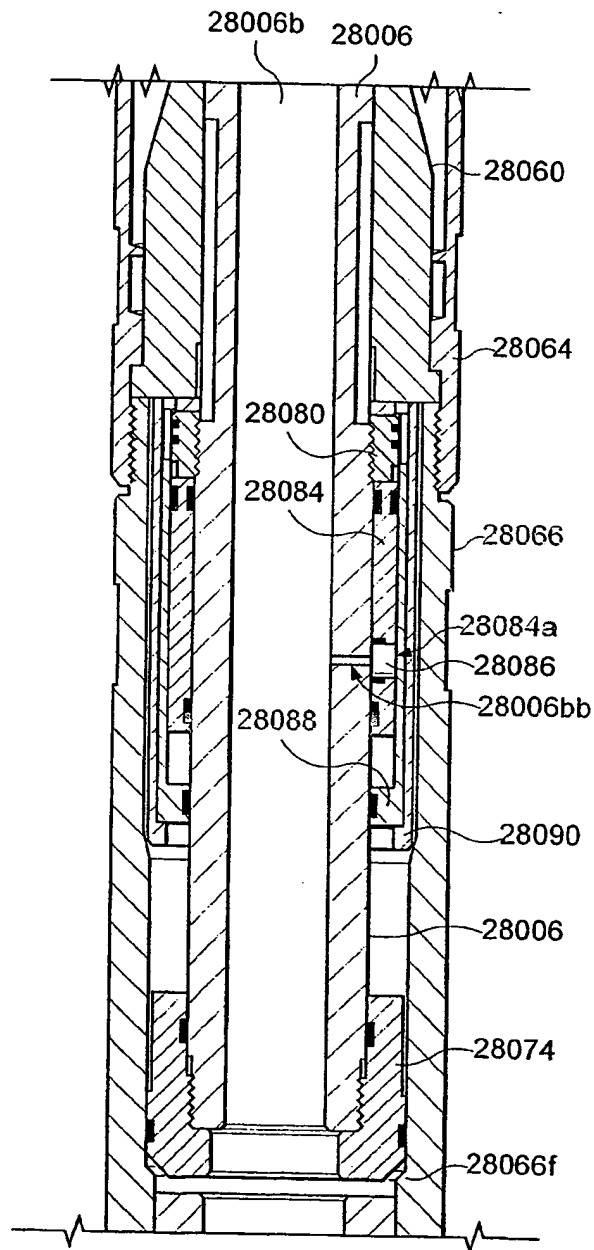


Fig. 15U

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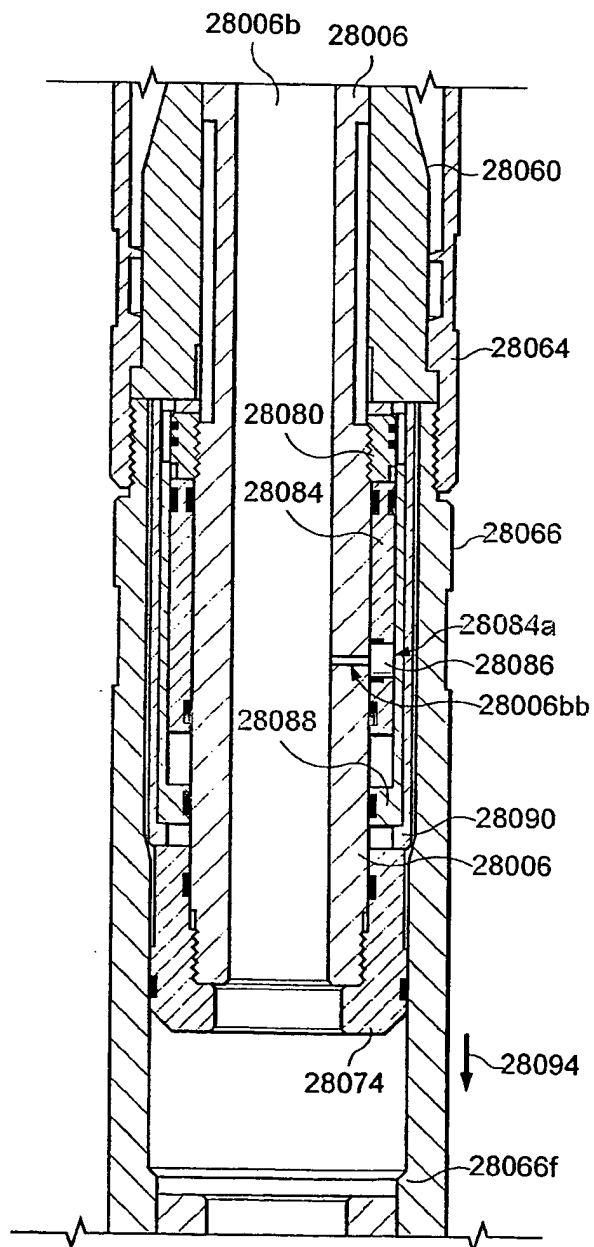


Fig. 15V

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Fig. 15W

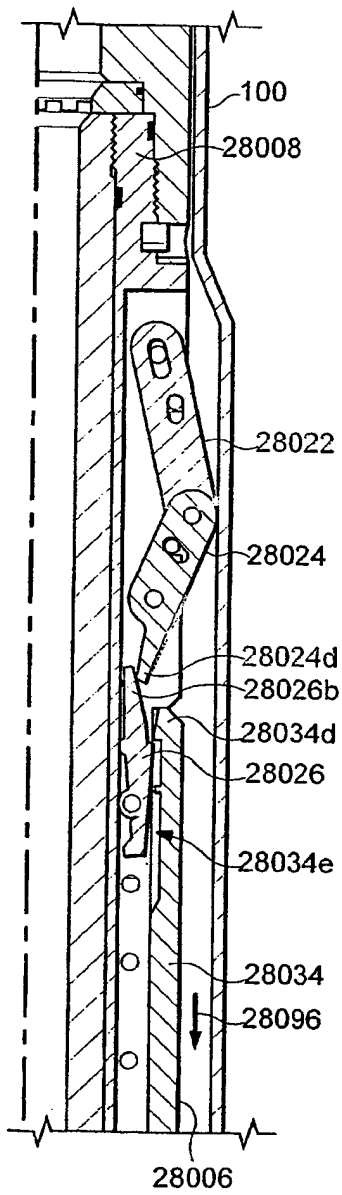


Fig. 15X

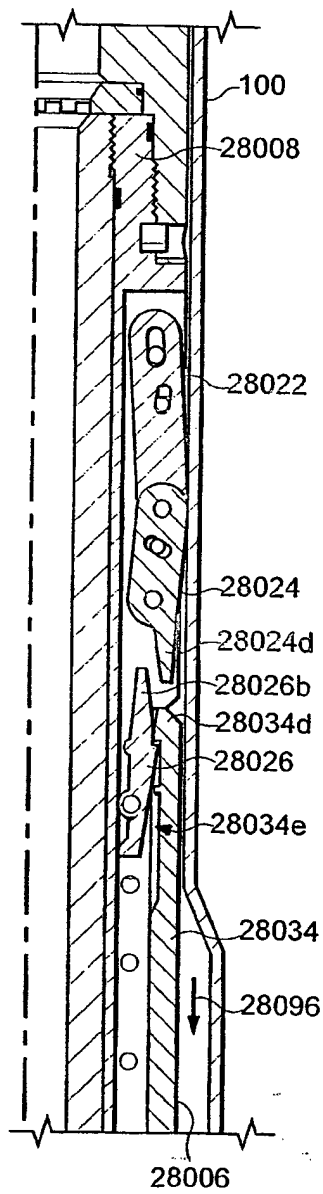
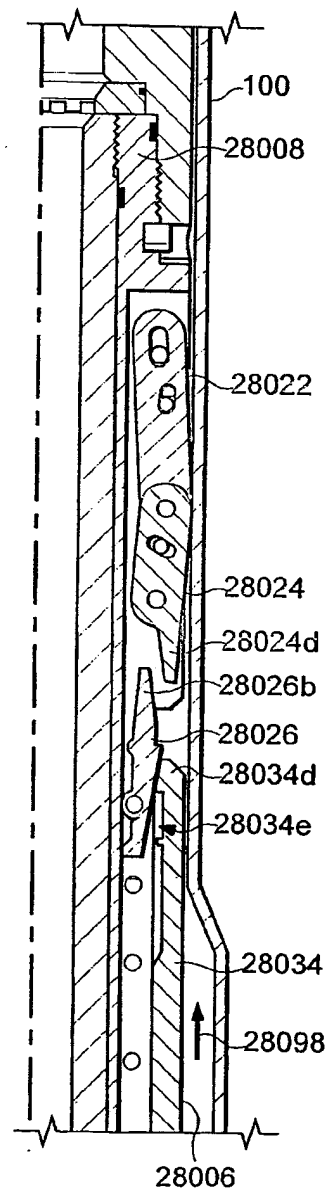


Fig. 15Y



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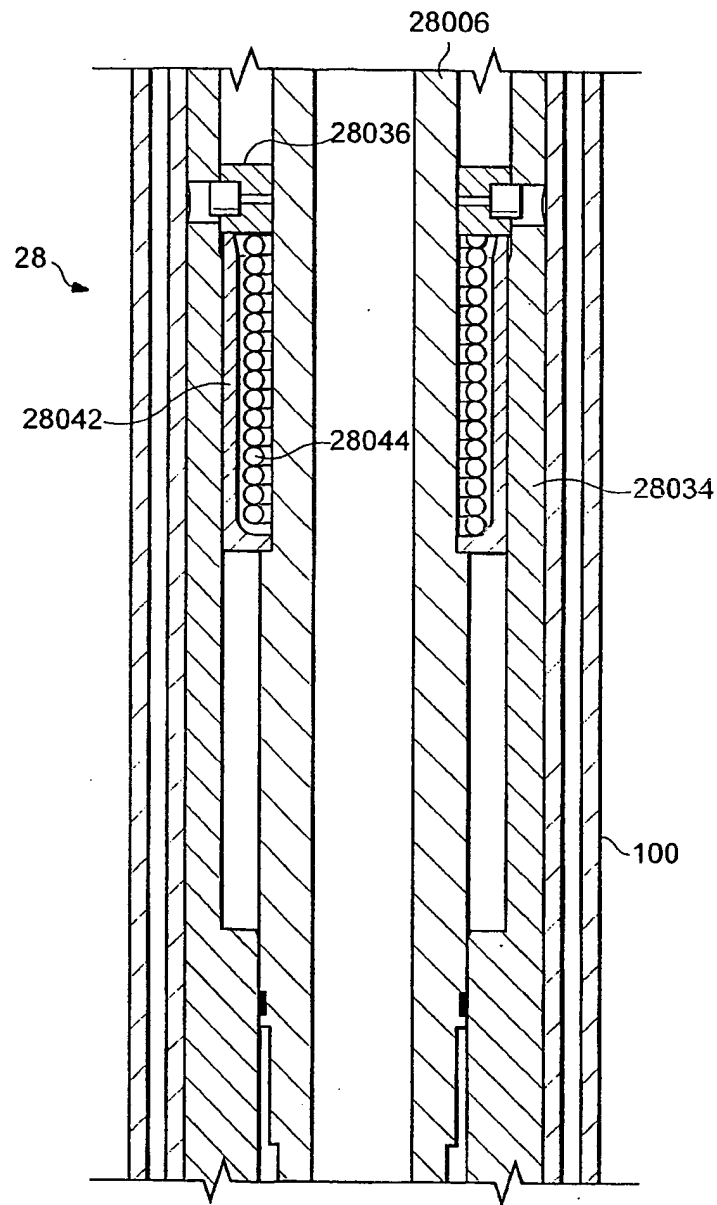


Fig. 15Z2

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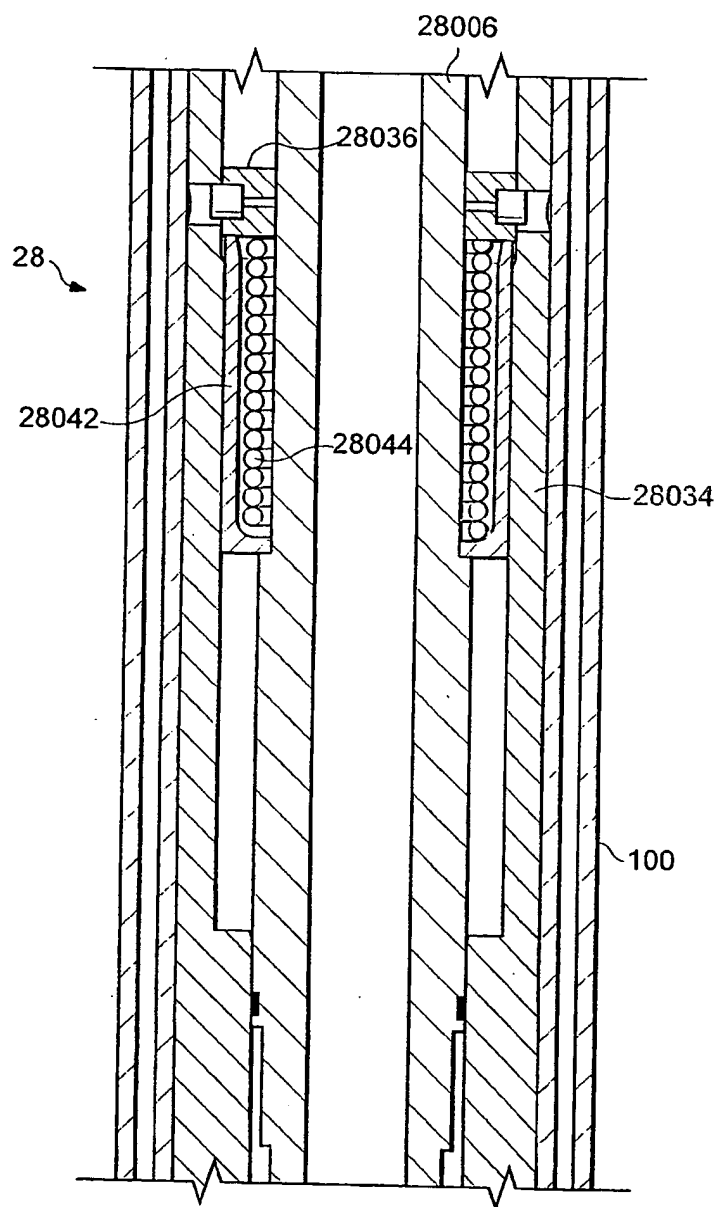


Fig. 15Z2

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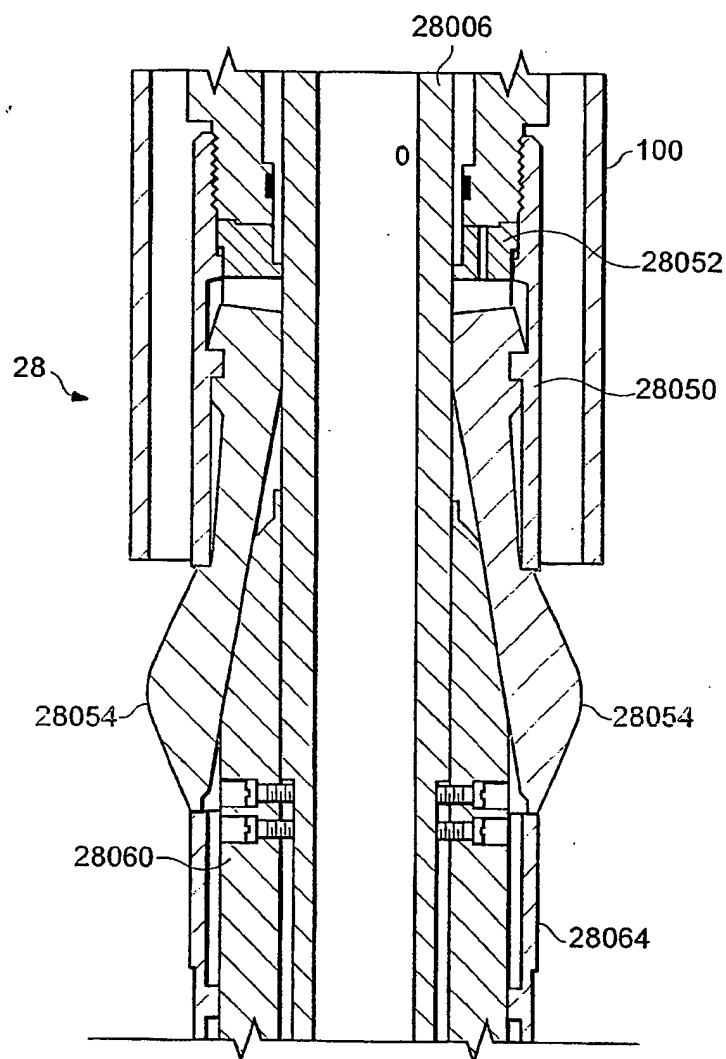


Fig. 15Z3

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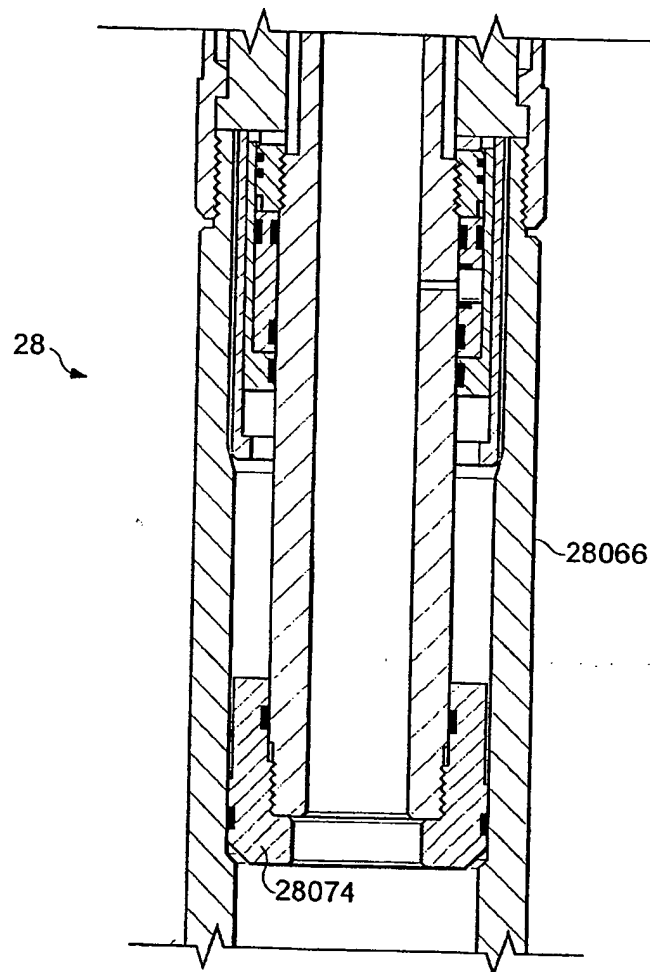


Fig. 15Z4

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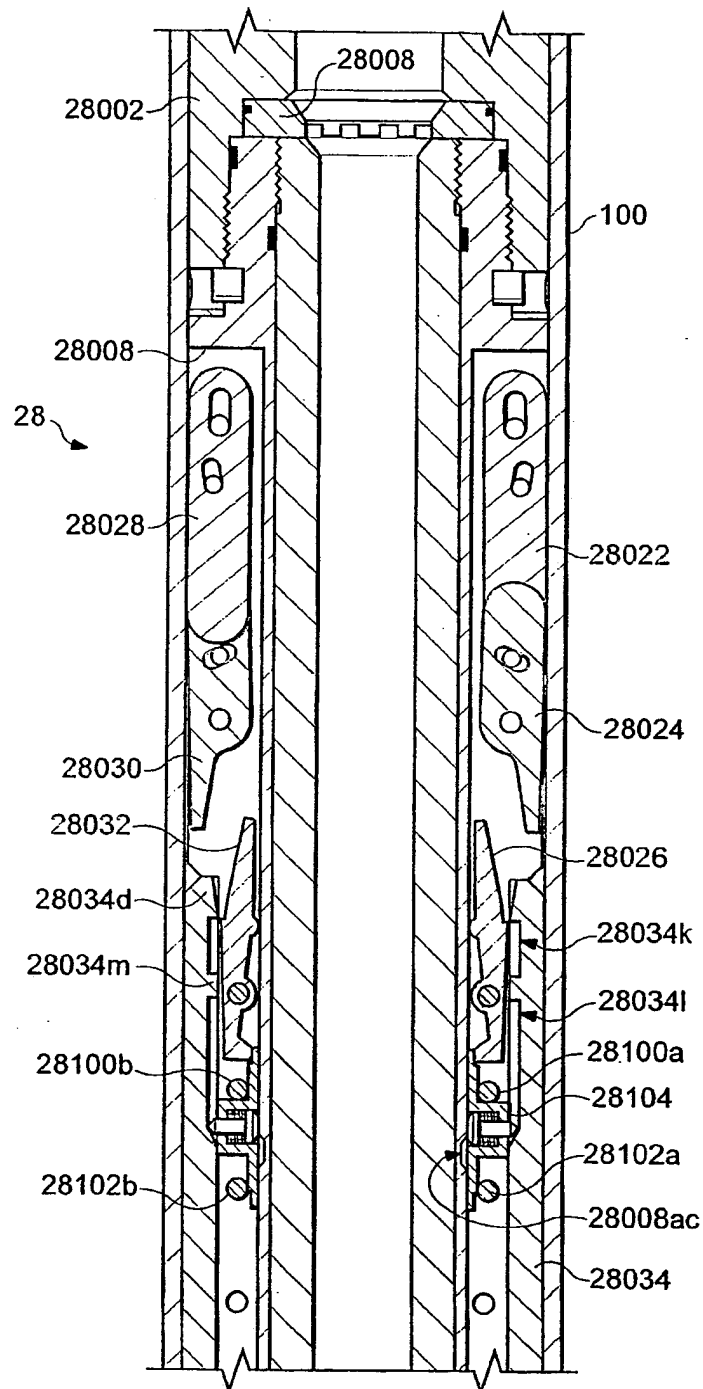


Fig. 15AA1

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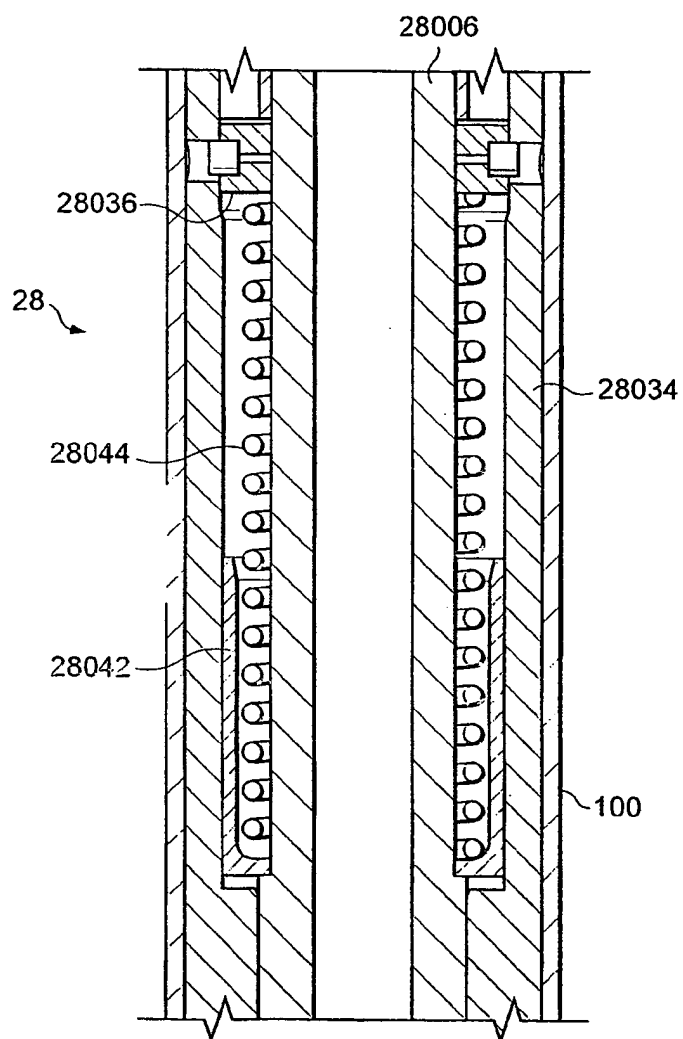


Fig. 15AA2

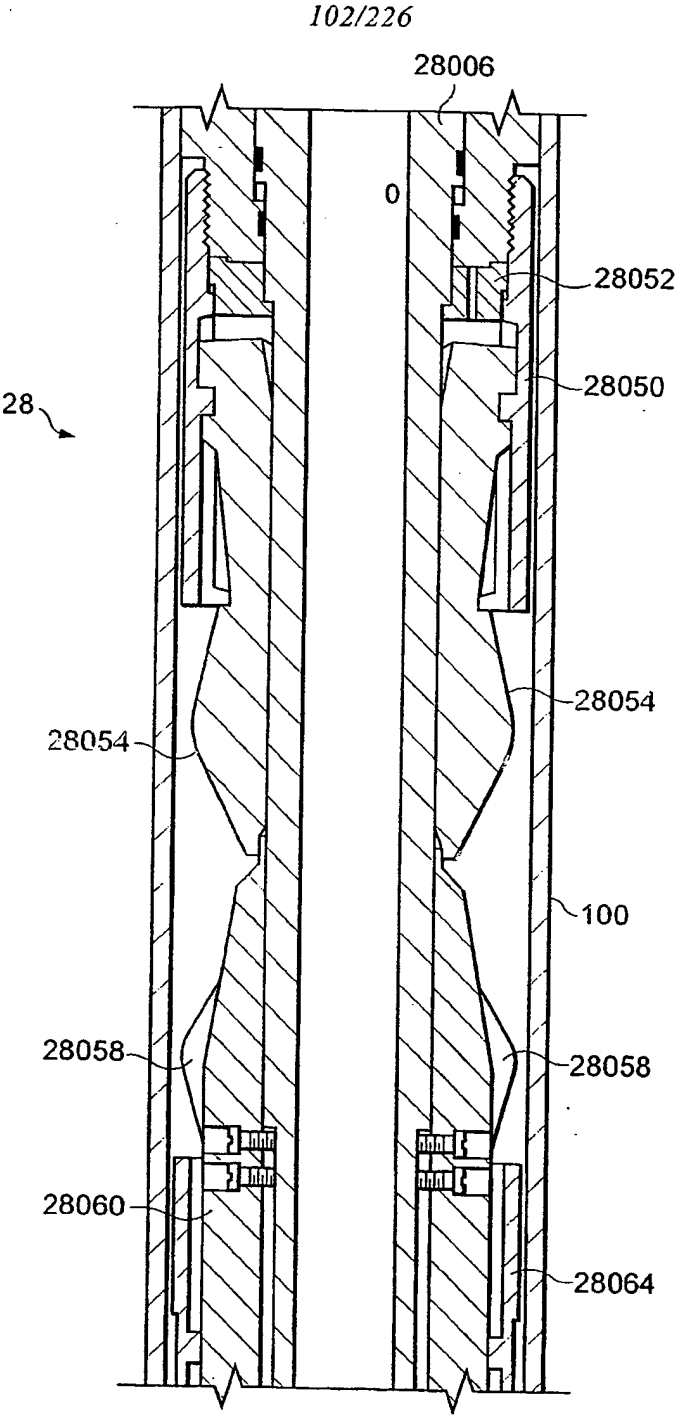


Fig. 15AA3

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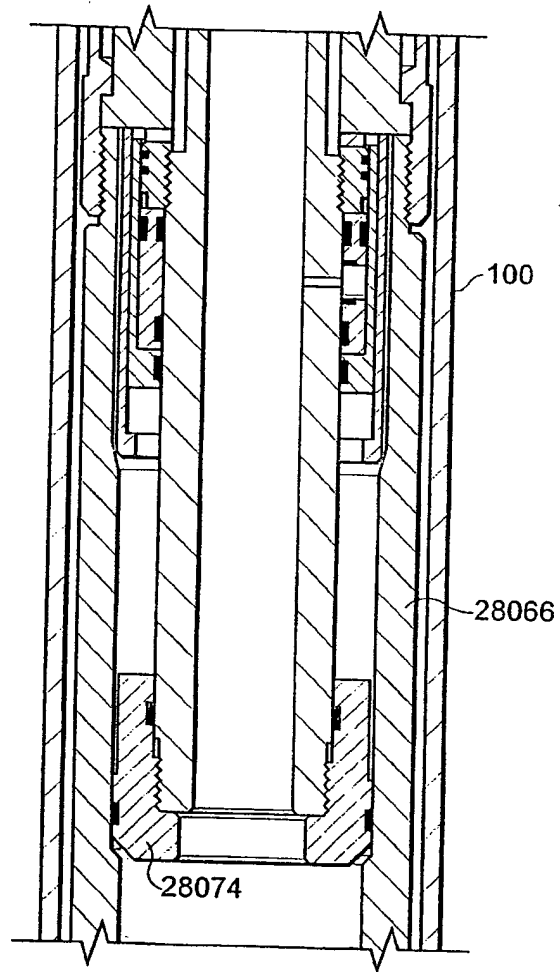


Fig. 15AA4

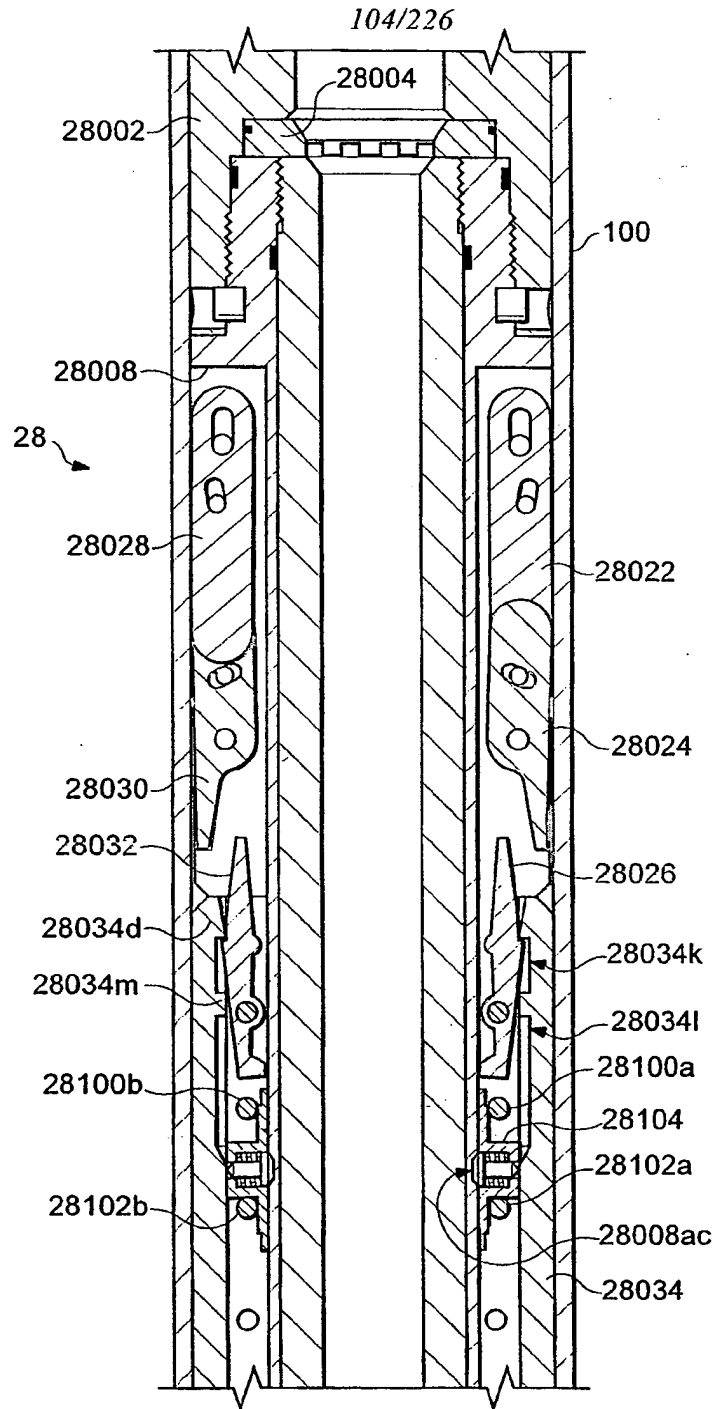


Fig. 15AB1

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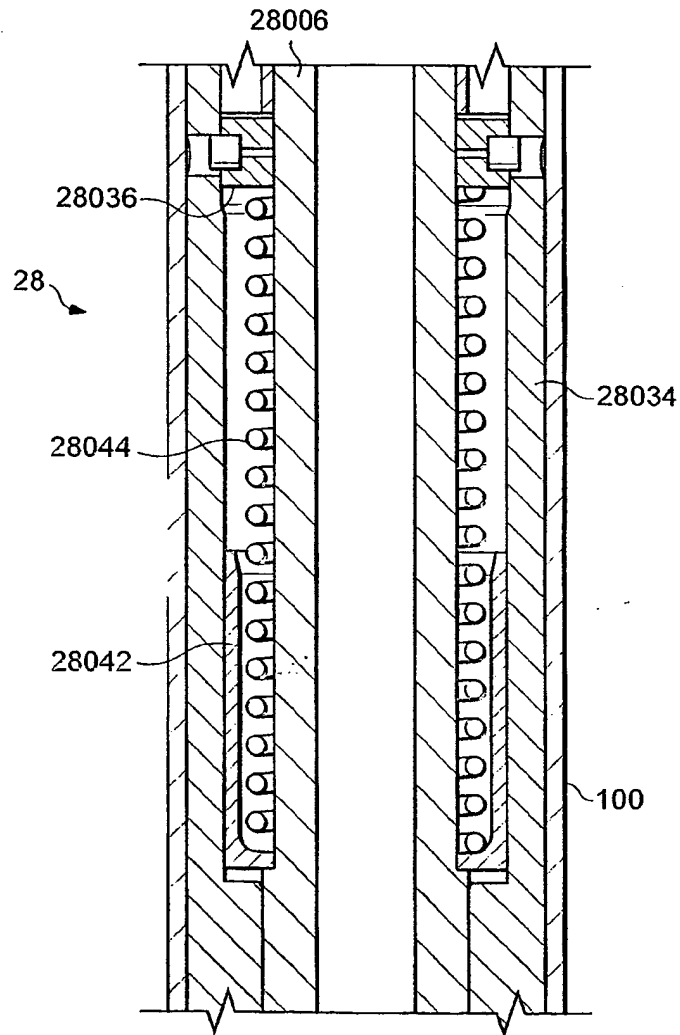


Fig. 15AB2

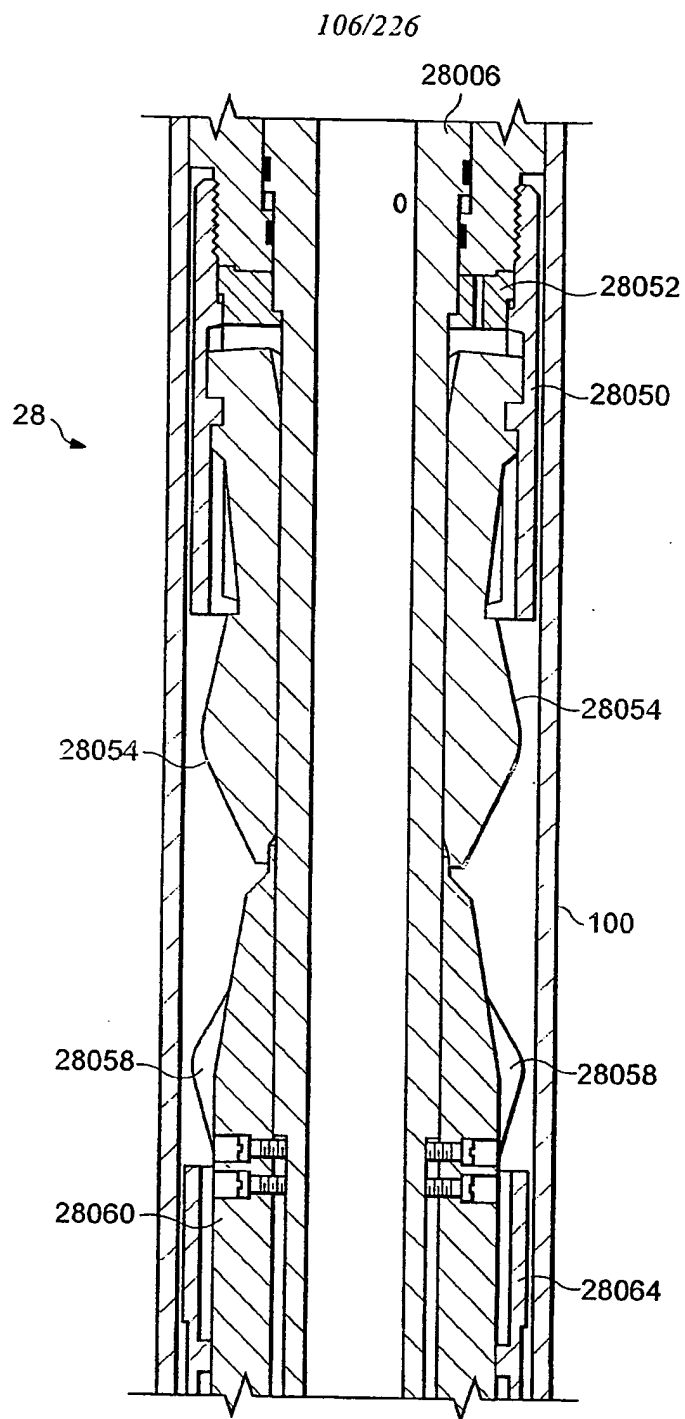


Fig. 15AB3

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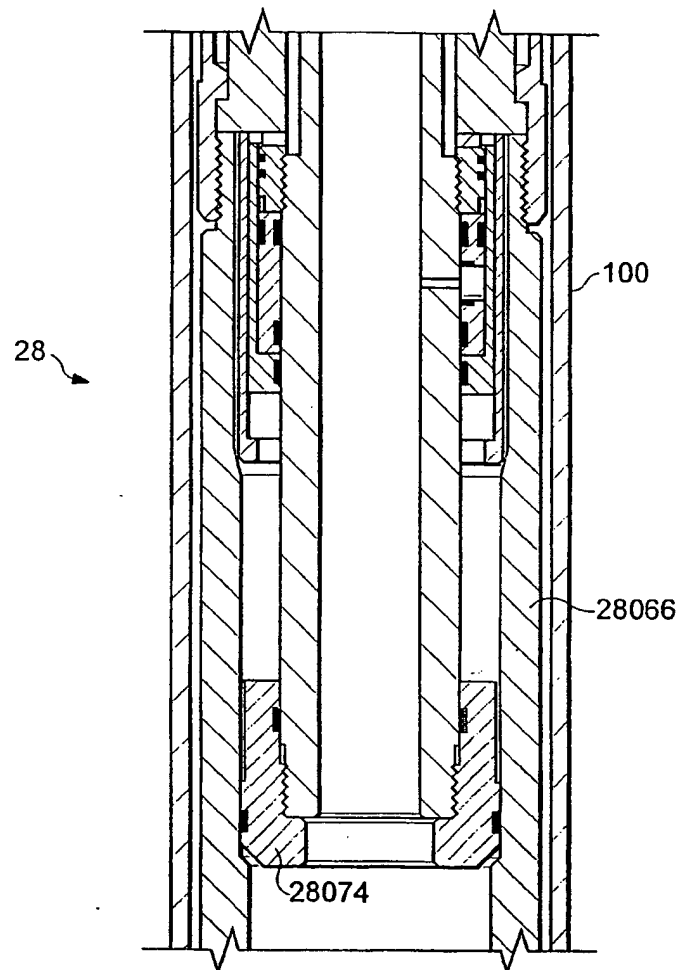


Fig. 15AB4

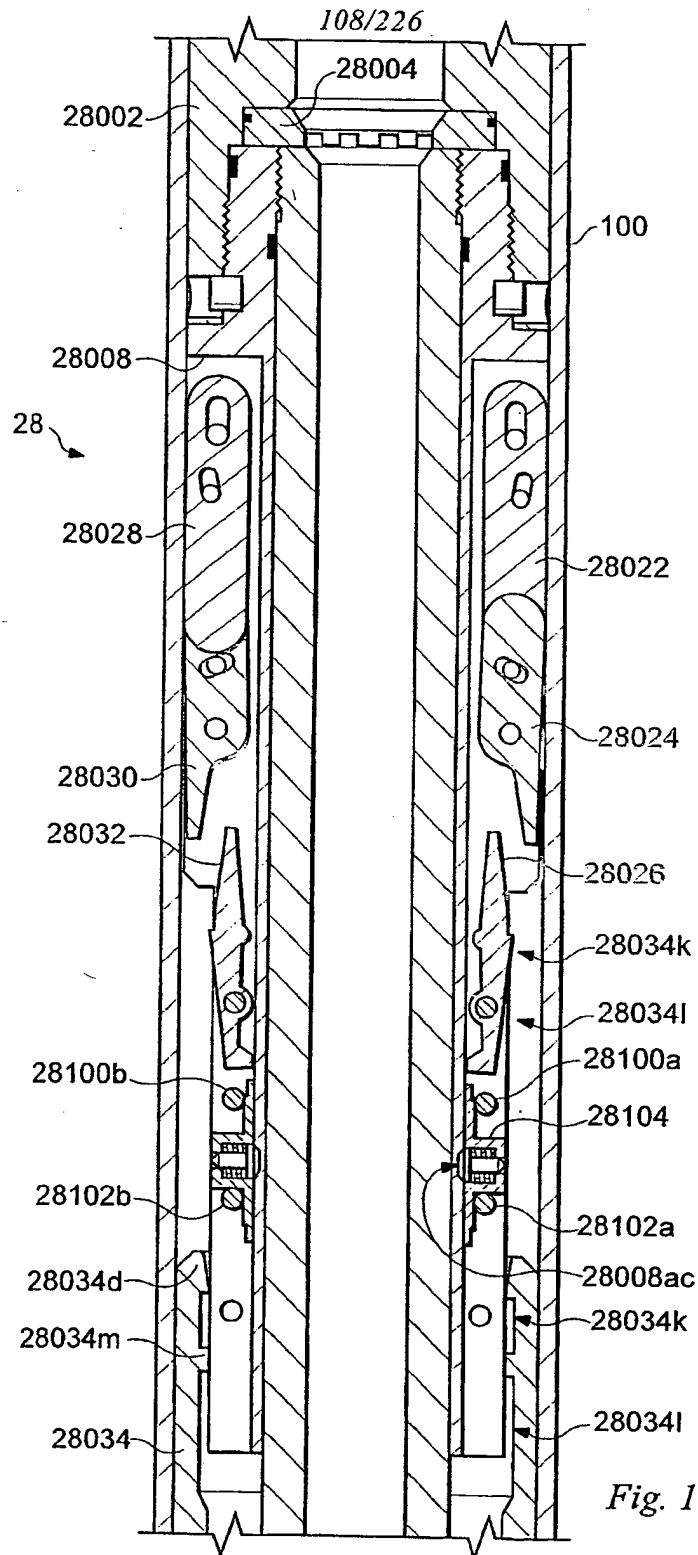


Fig. 15AC1

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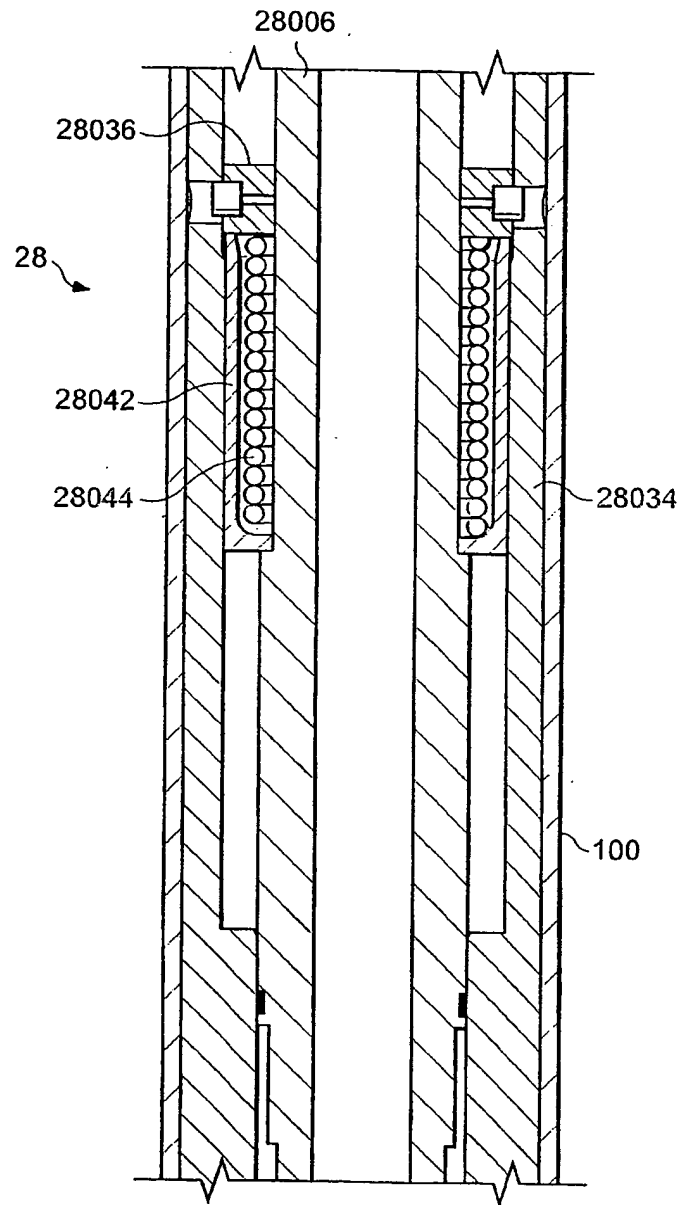


Fig. 15AC2

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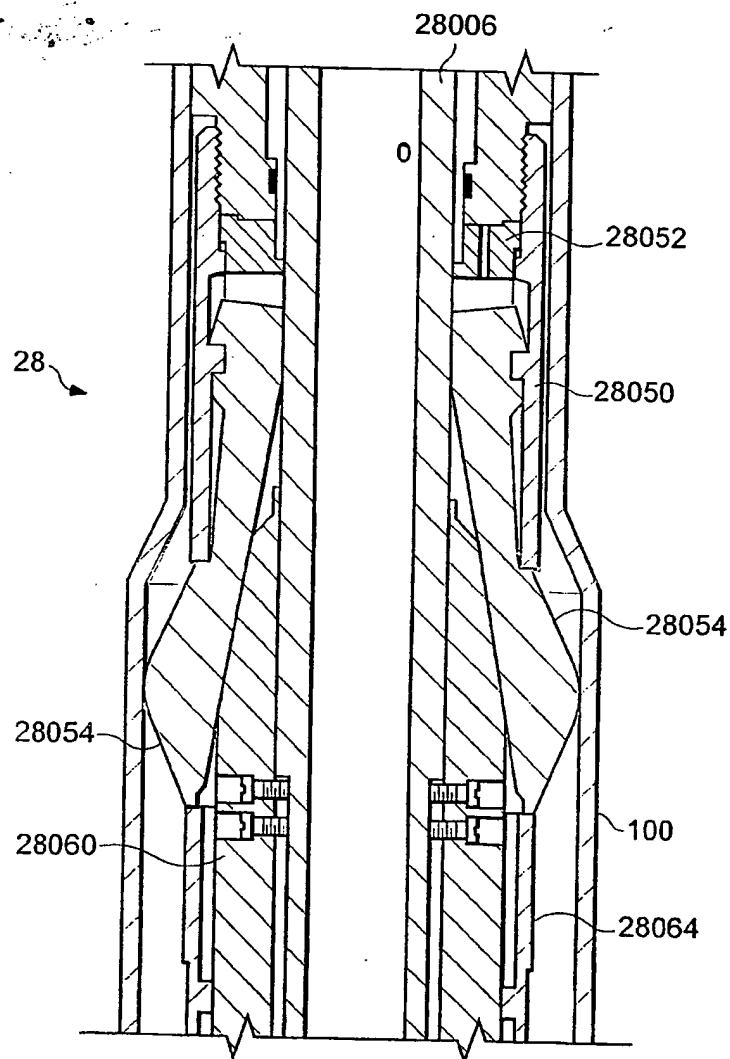
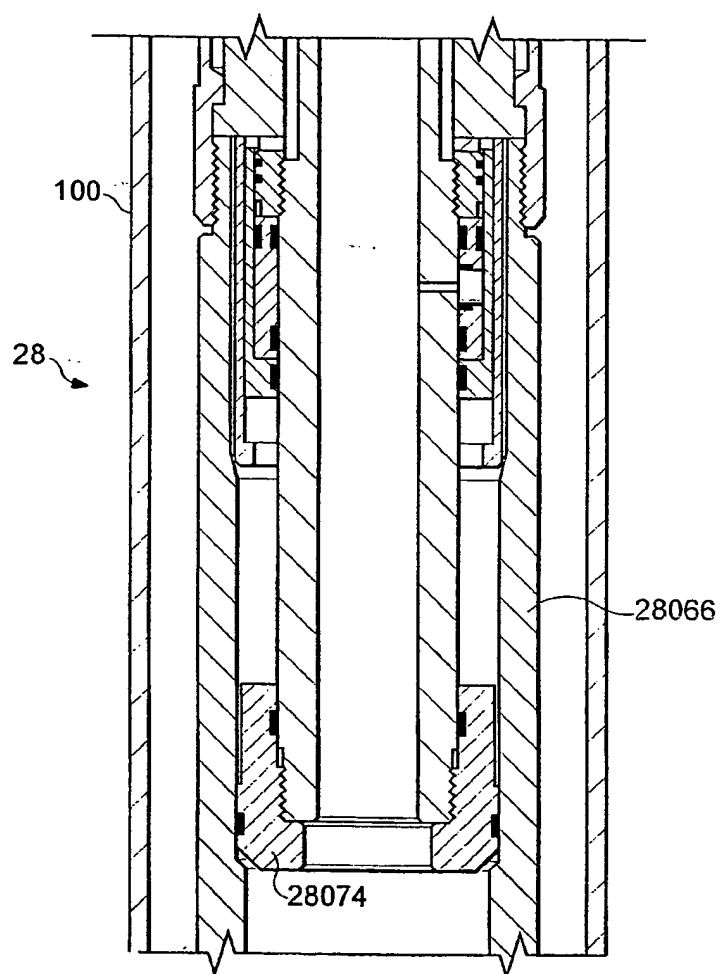


Fig. 15AC3

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*Fig. 15AC4*

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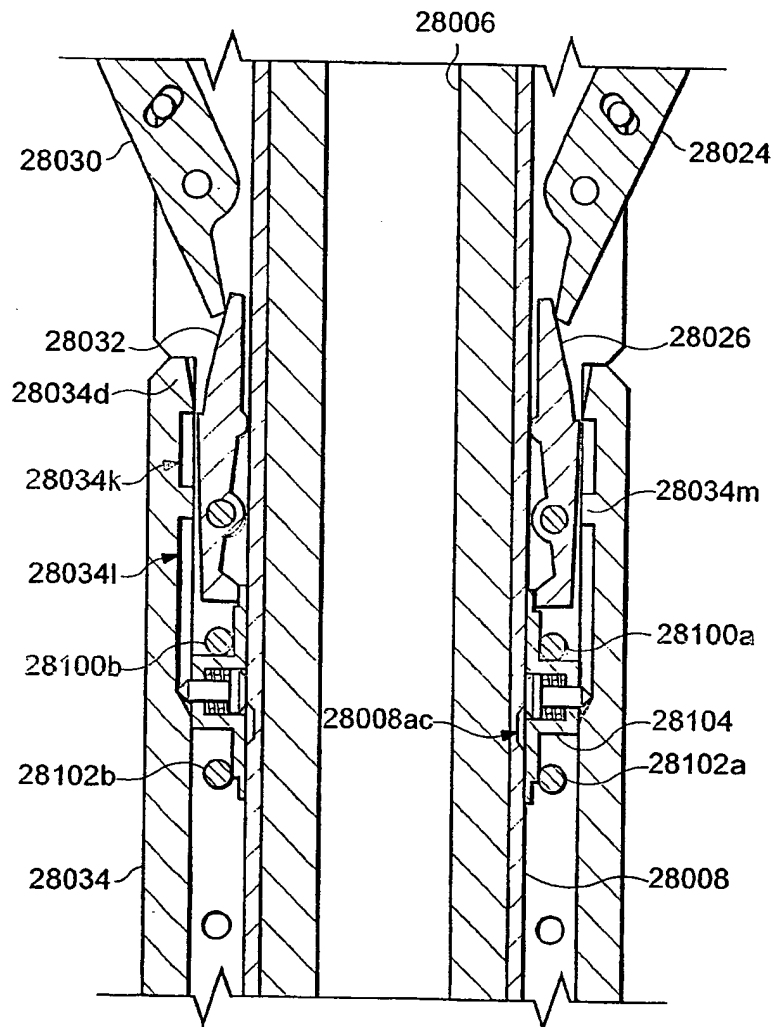


Fig. 15AD

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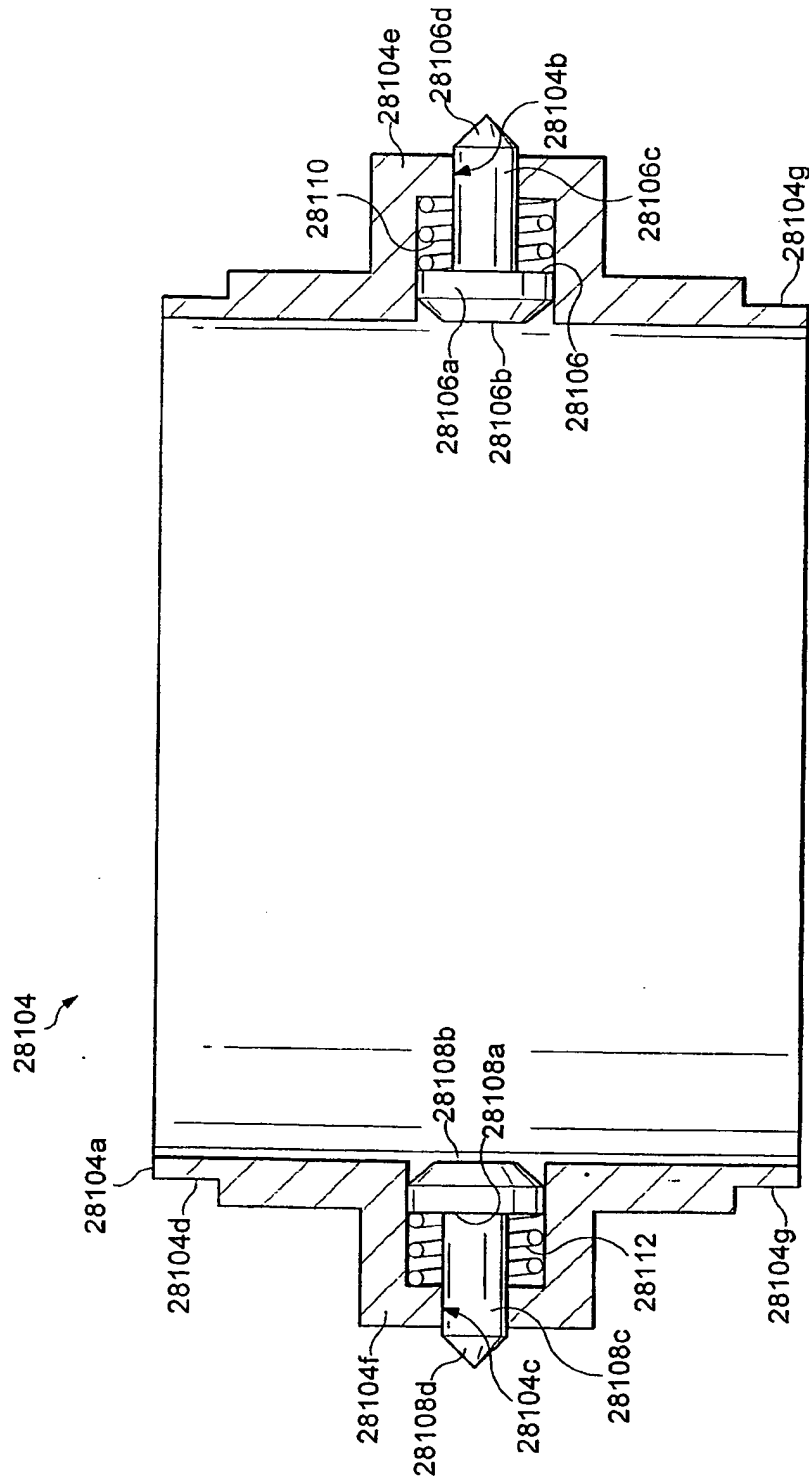
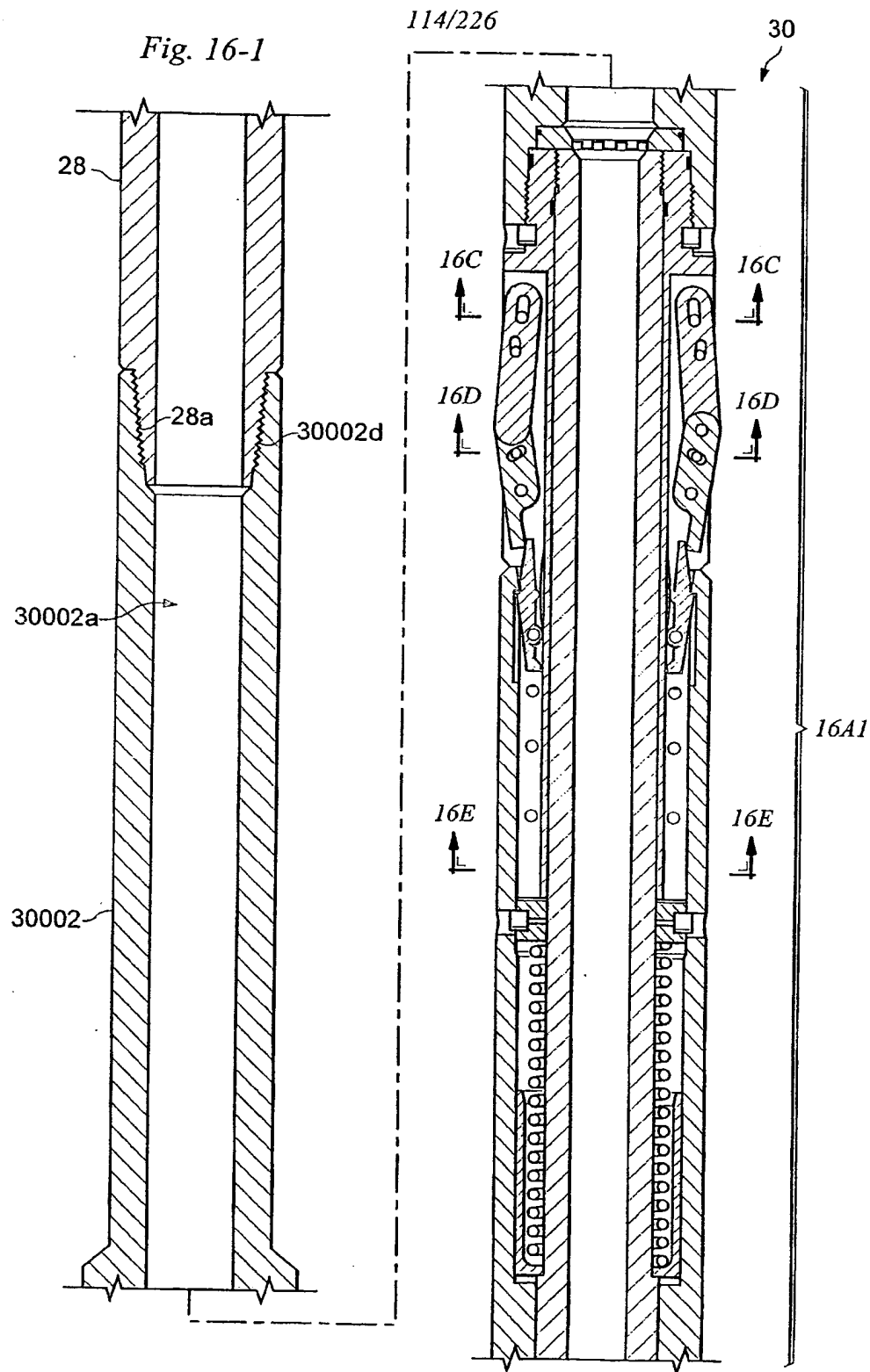


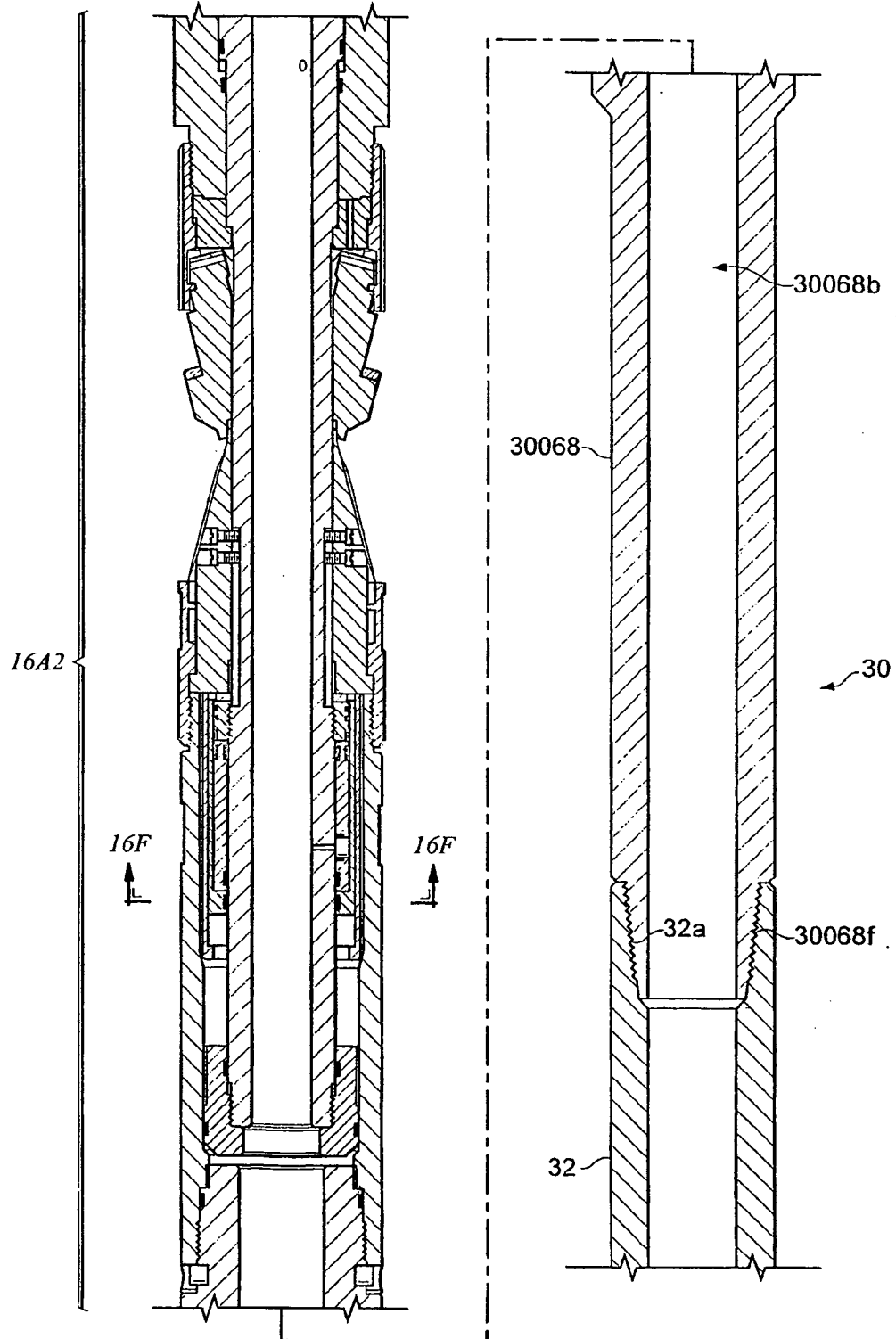
Fig. 15AE

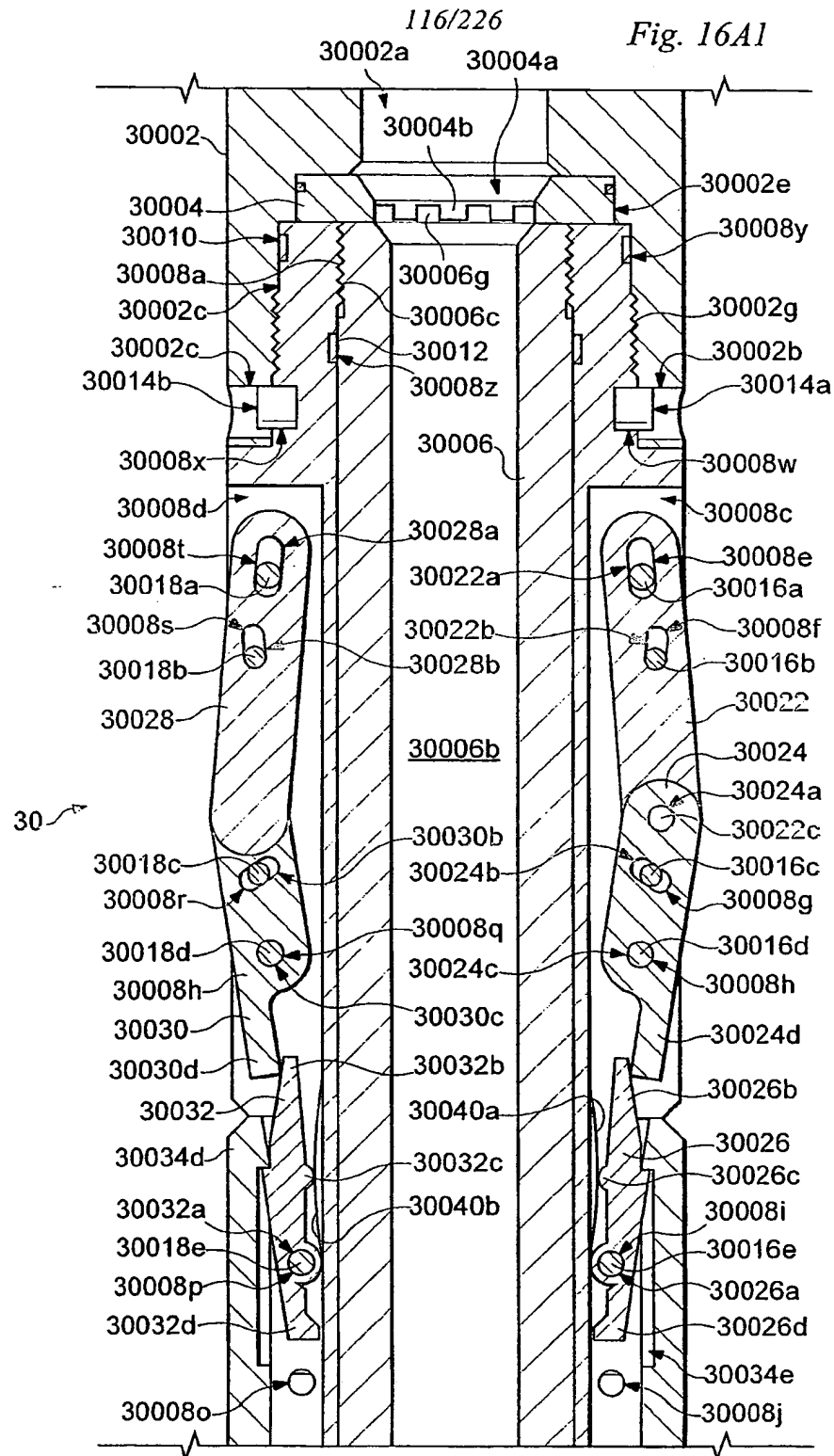
Fig. 16-1

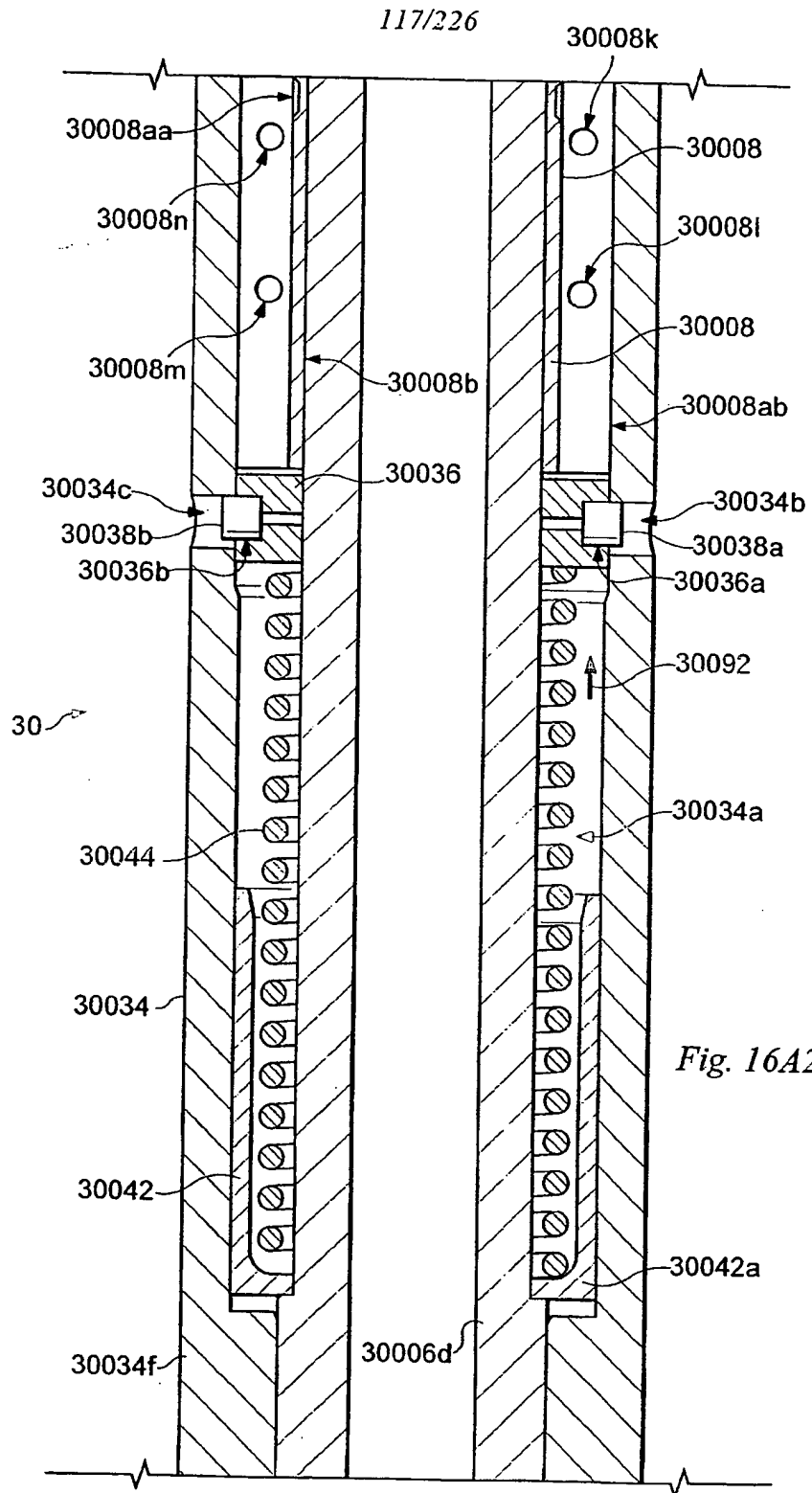


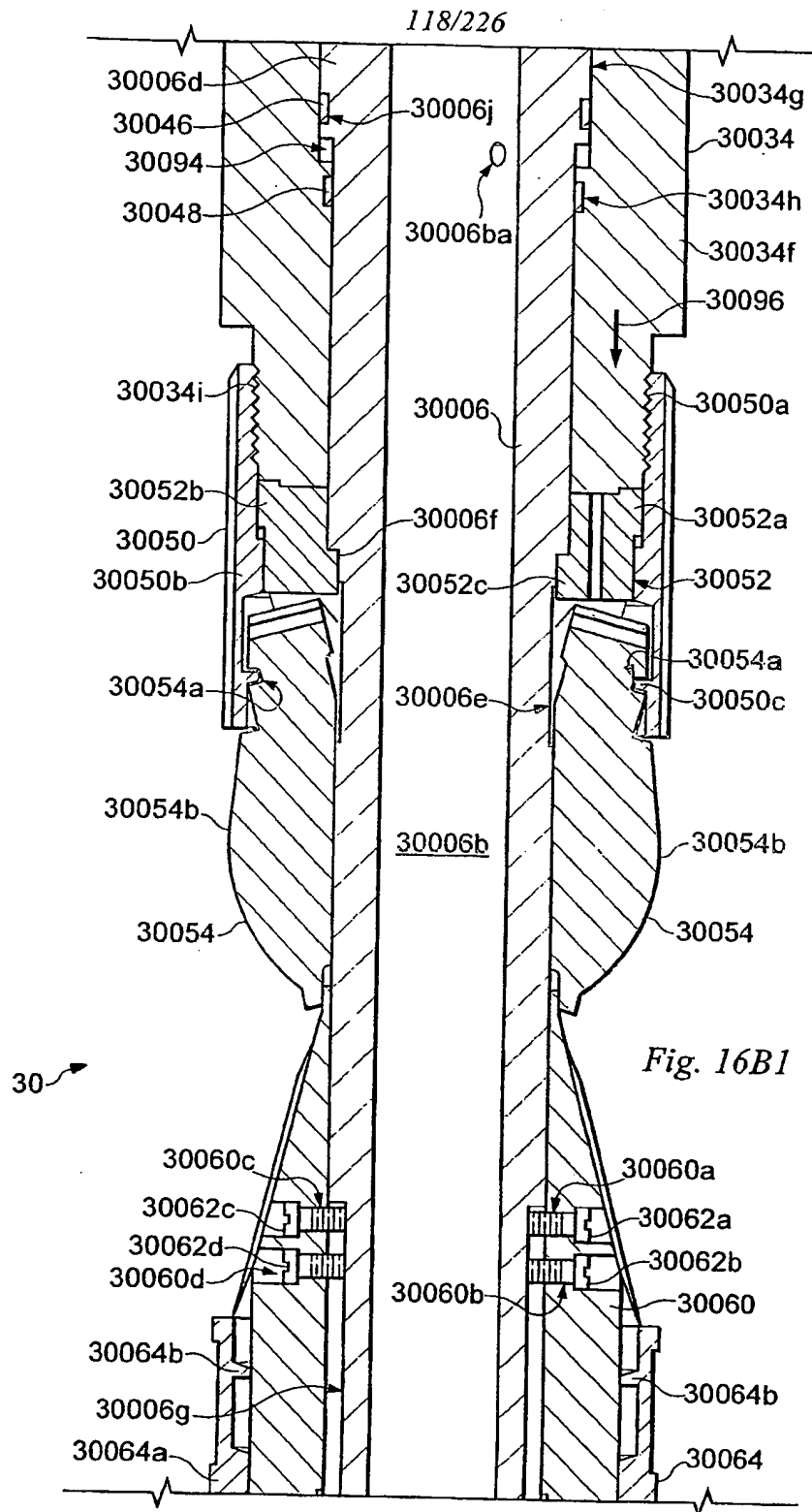
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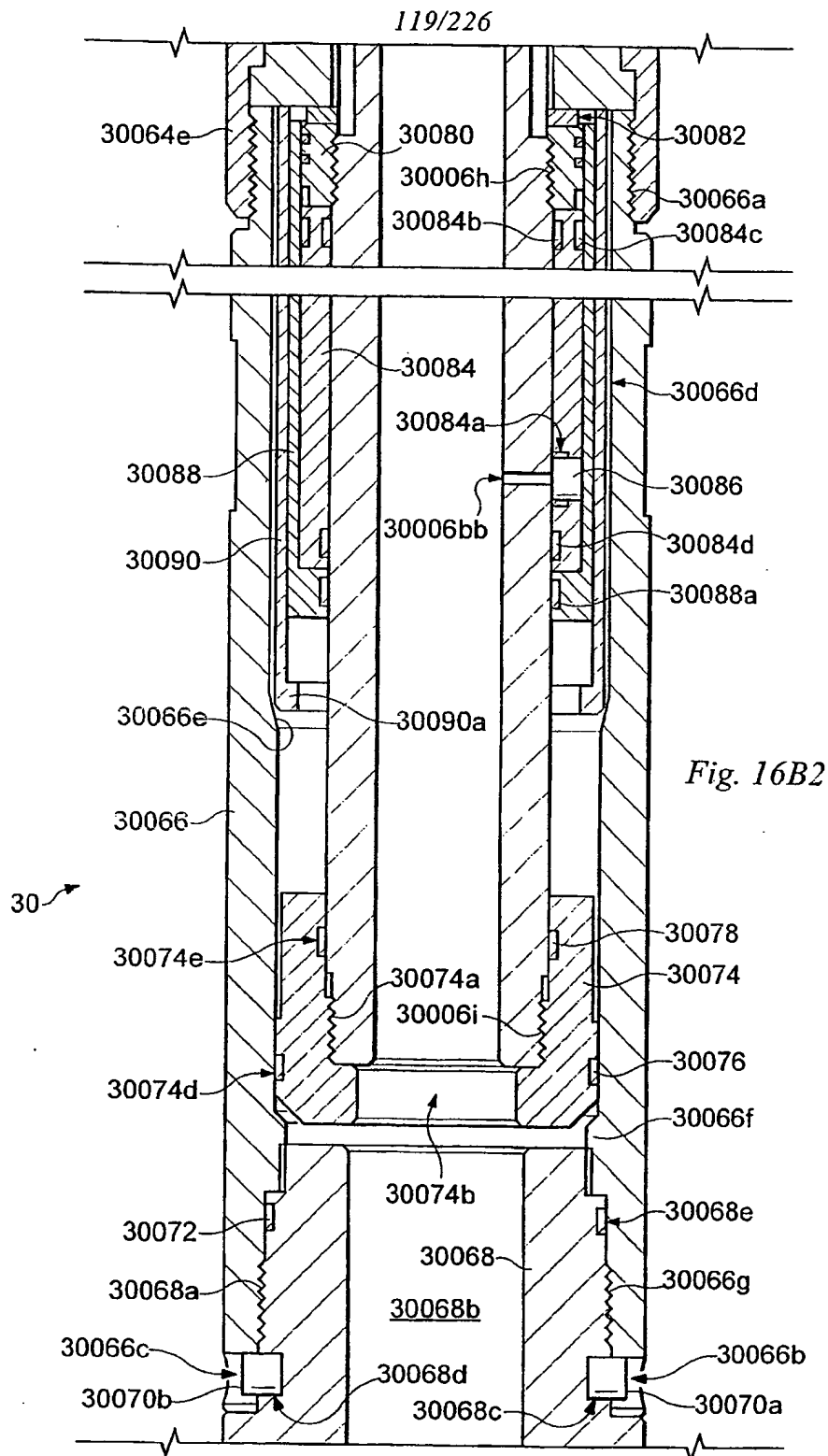
Fig. 16-2











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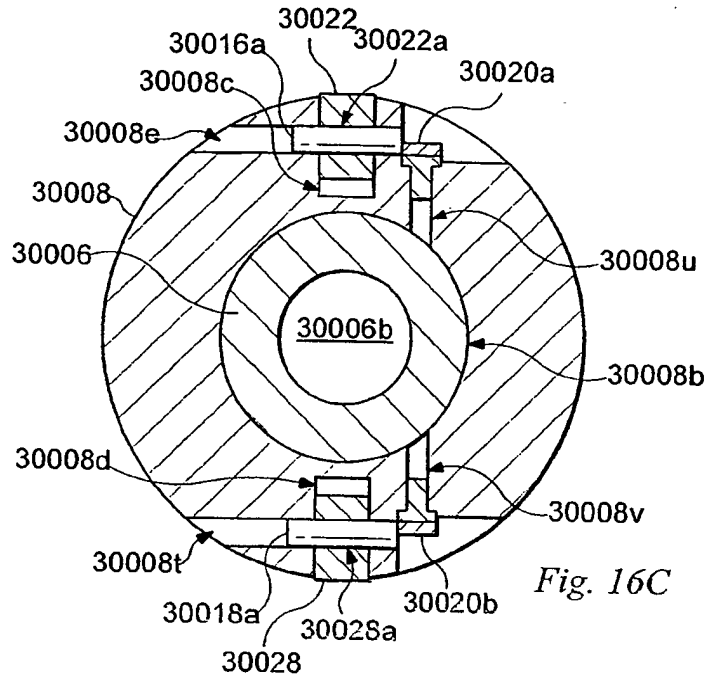


Fig. 16C

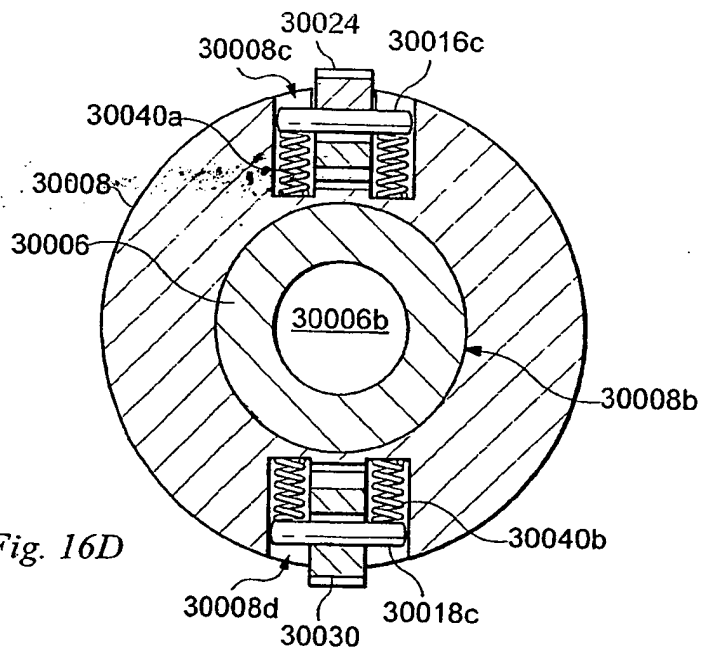


Fig. 16D

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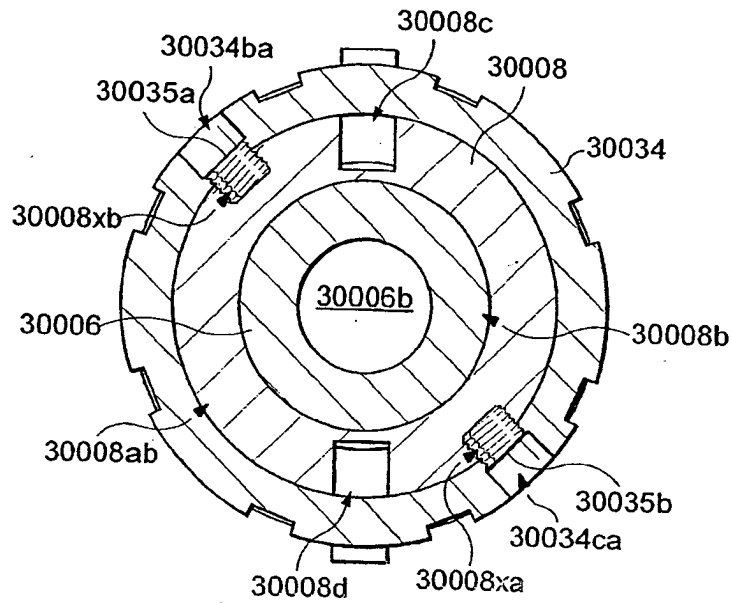


Fig. 16E

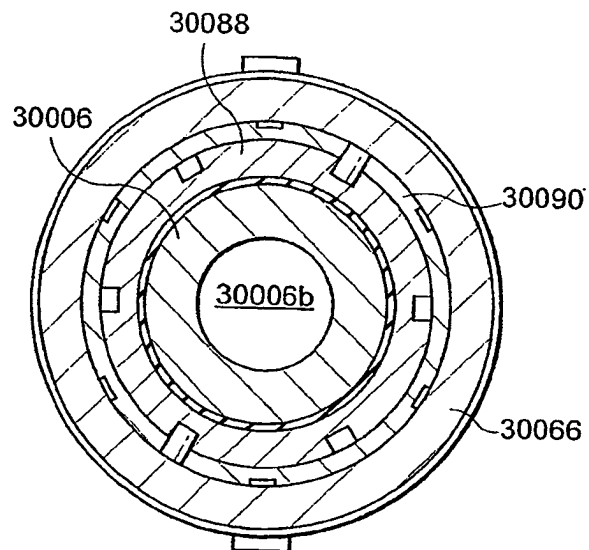


Fig. 16F

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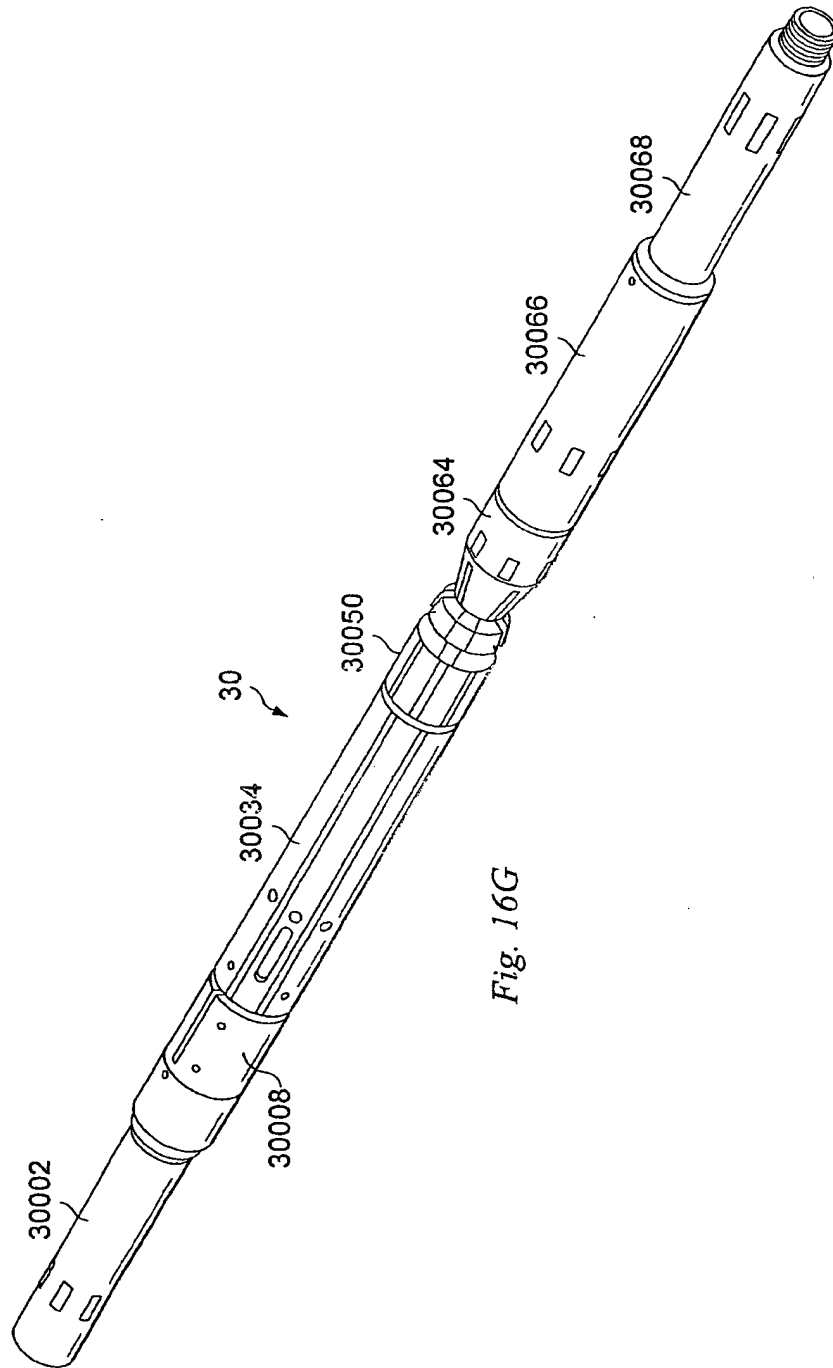


Fig. 16G

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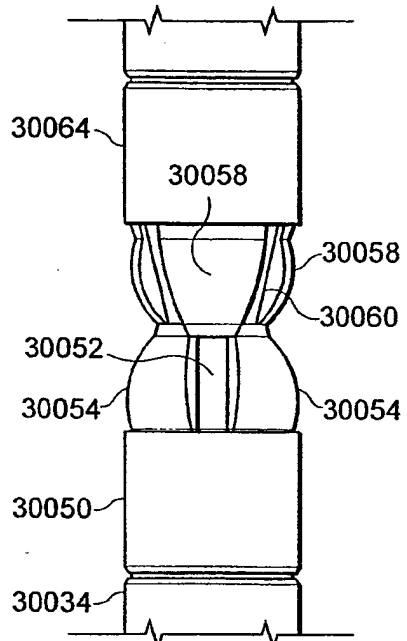


Fig. 16H

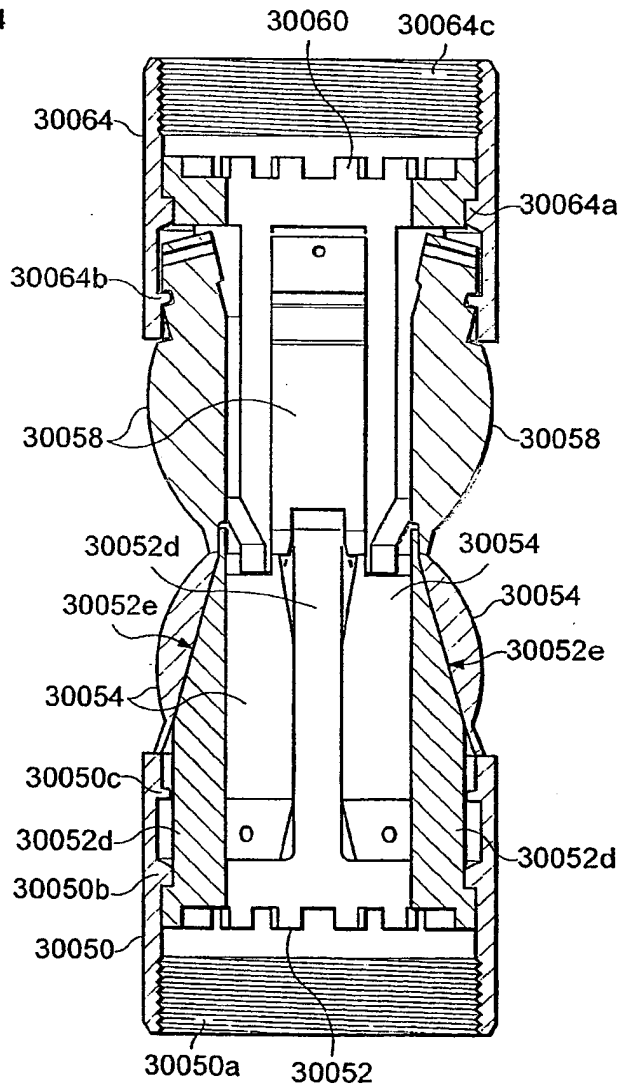
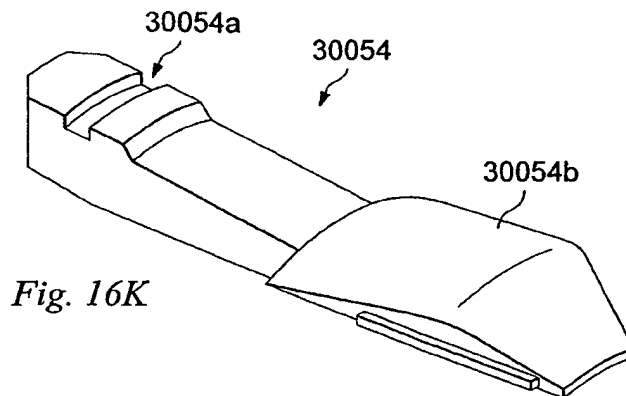
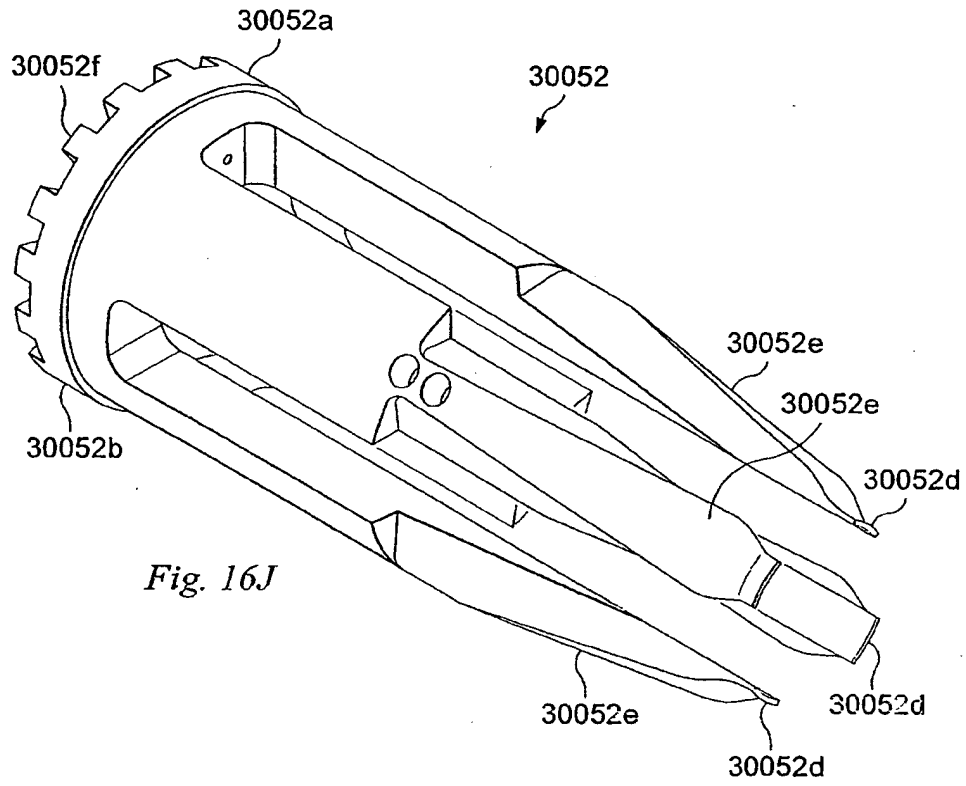


FIG. 16I

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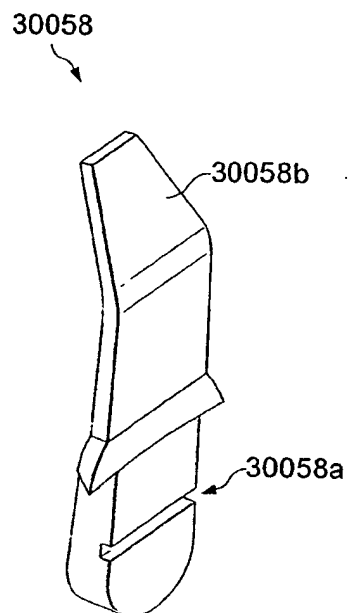


Fig. 16L

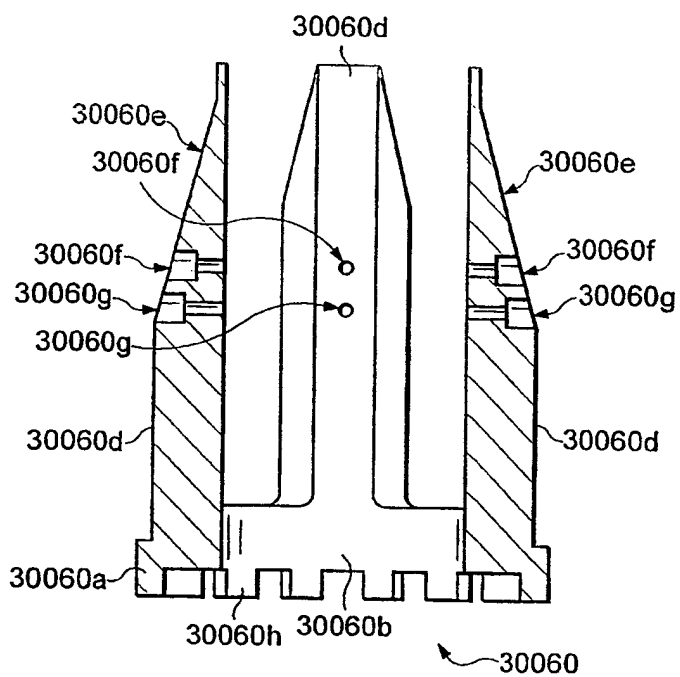


Fig. 16M

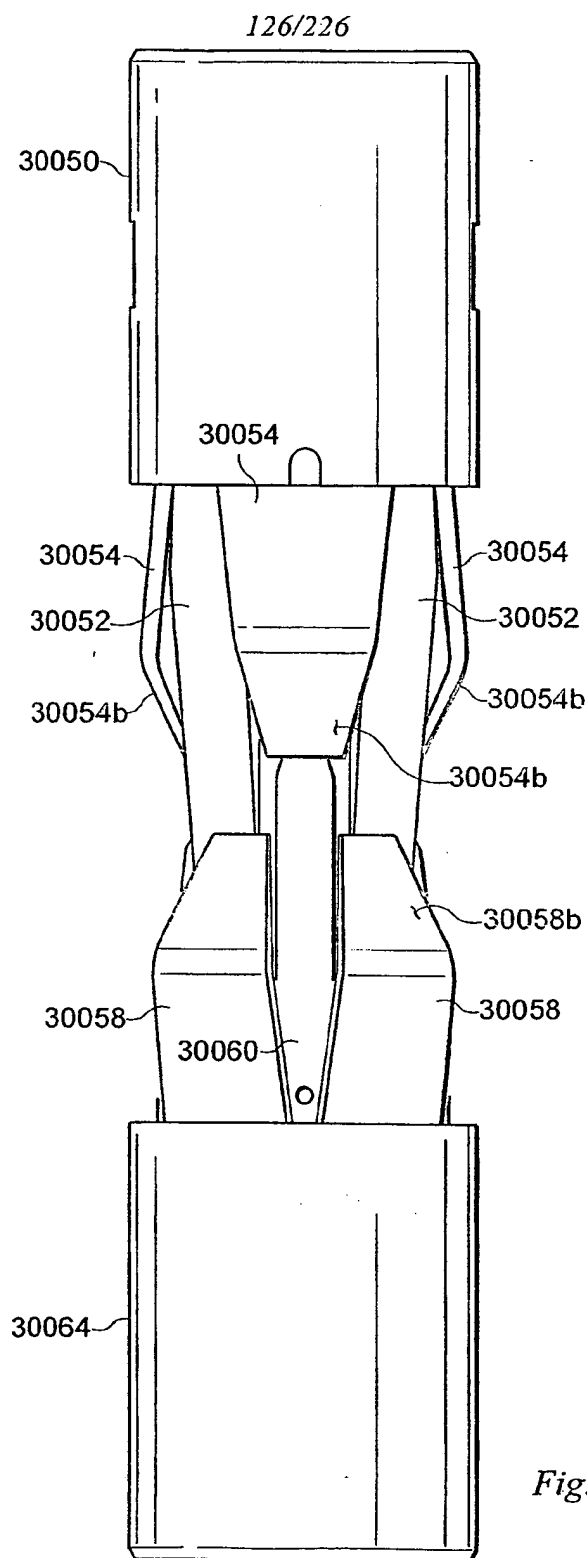


Fig. 16N

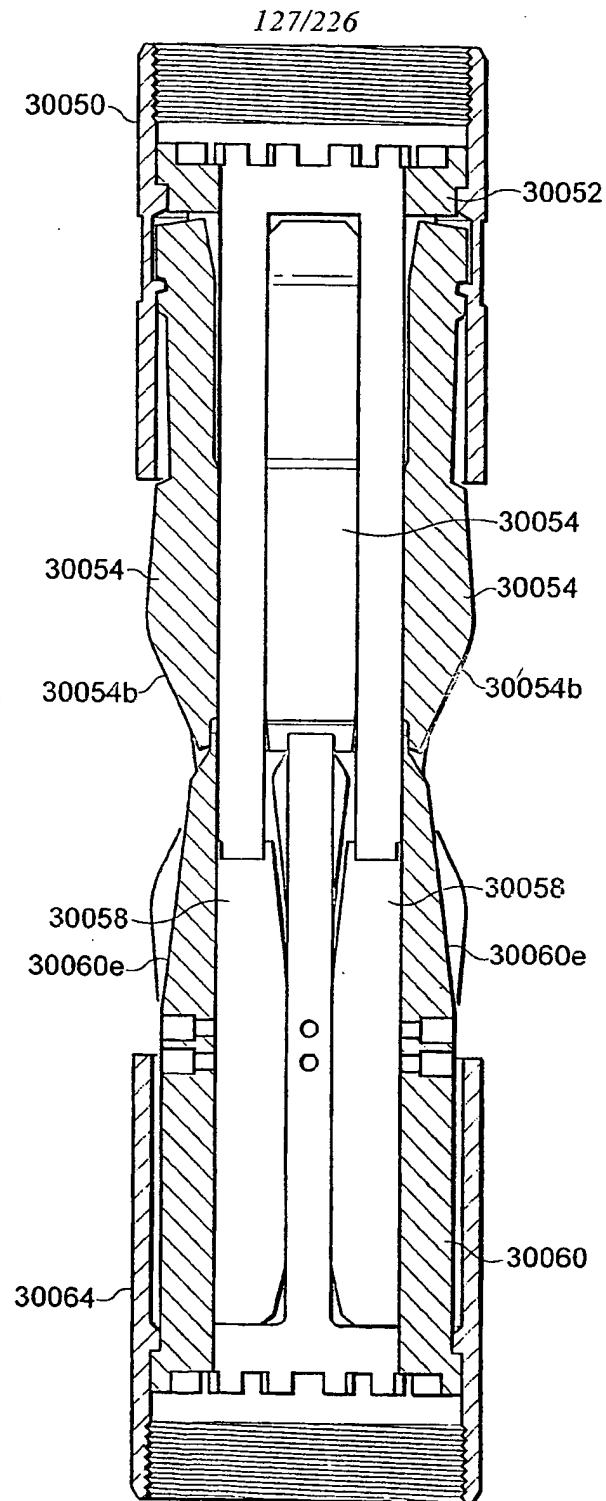
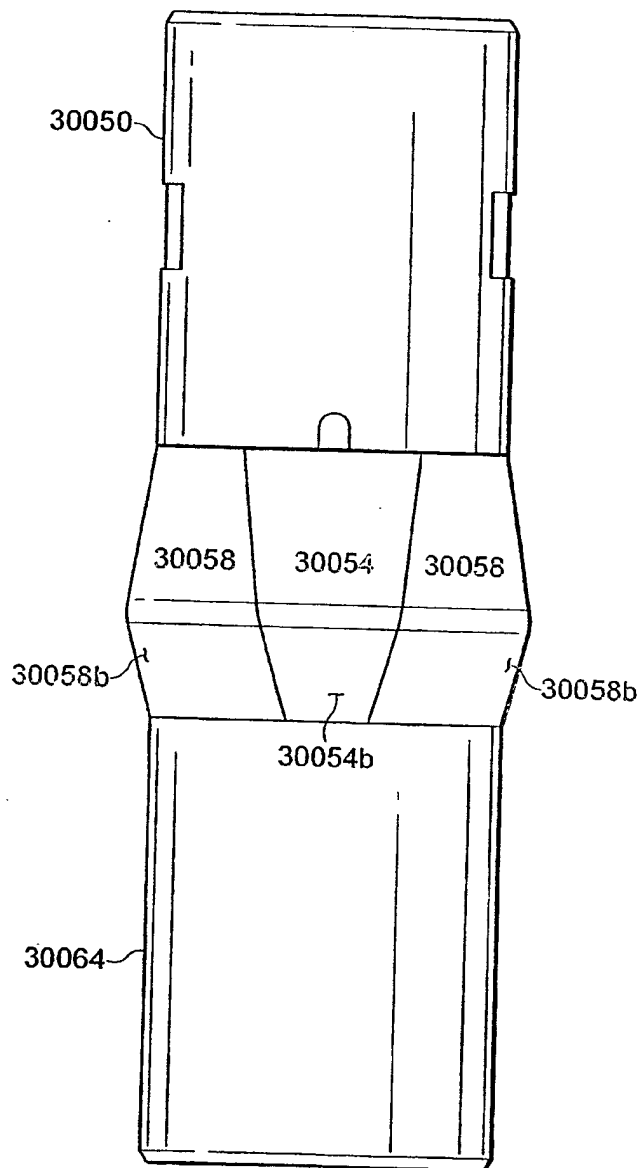
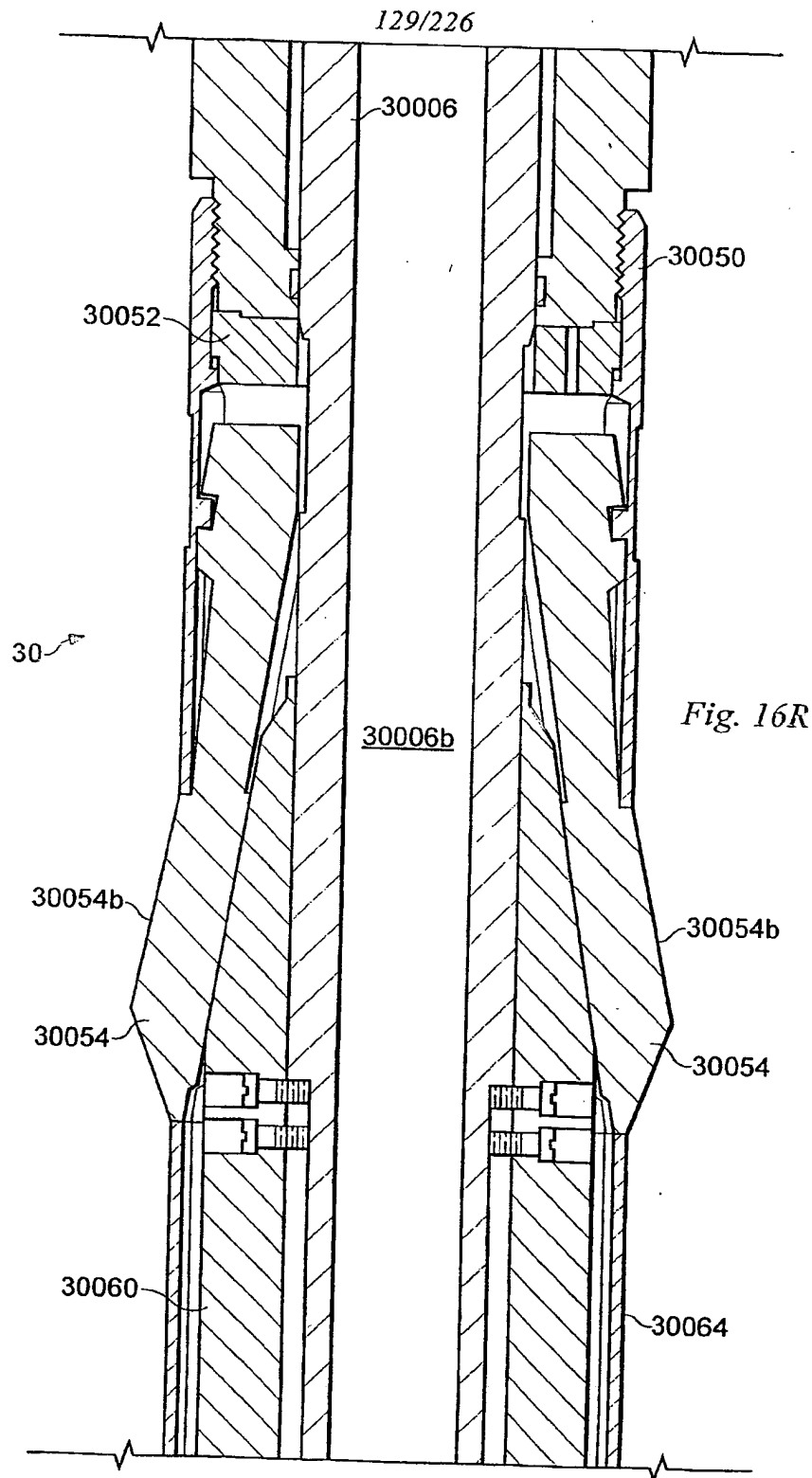


Fig. 160

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*Fig. 16P*



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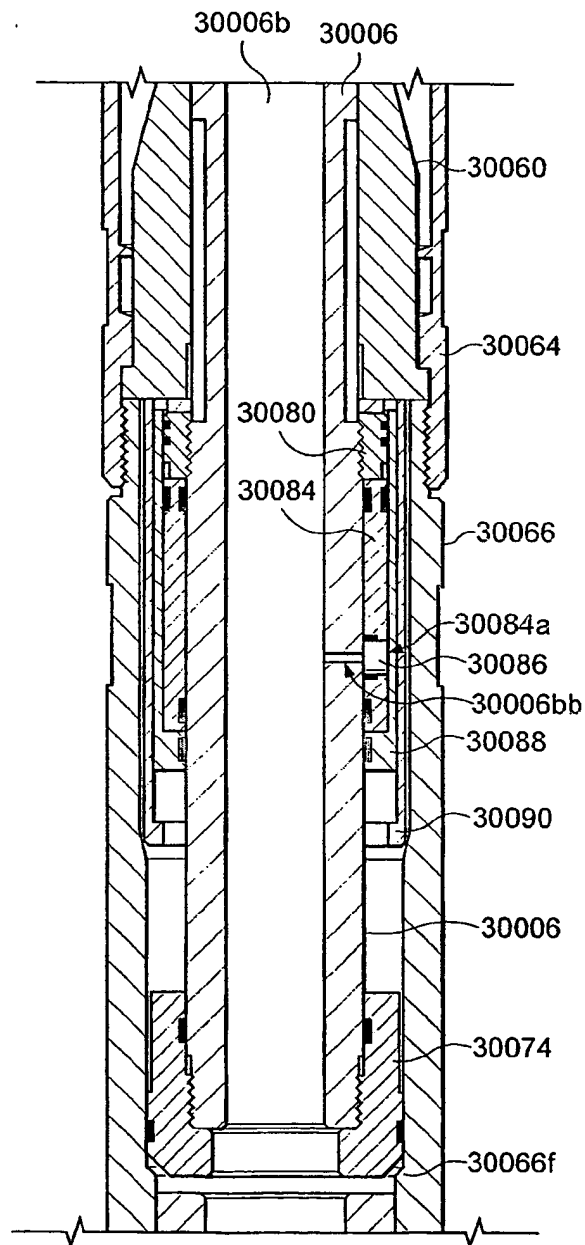


Fig. 16S

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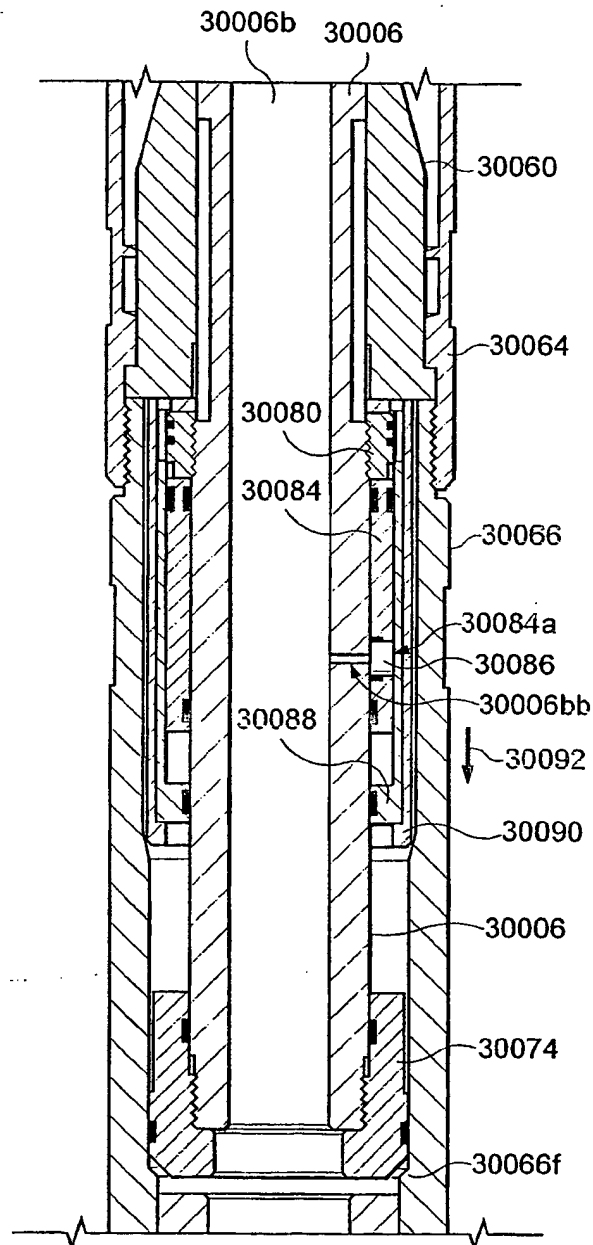


Fig. 16T

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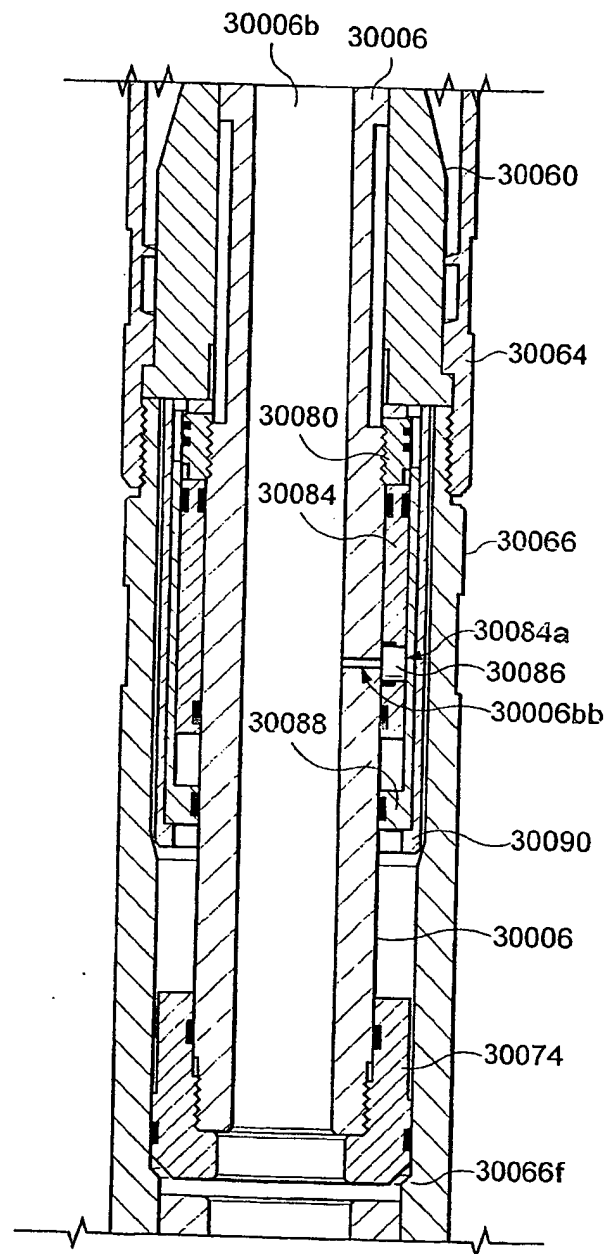


Fig. 16U

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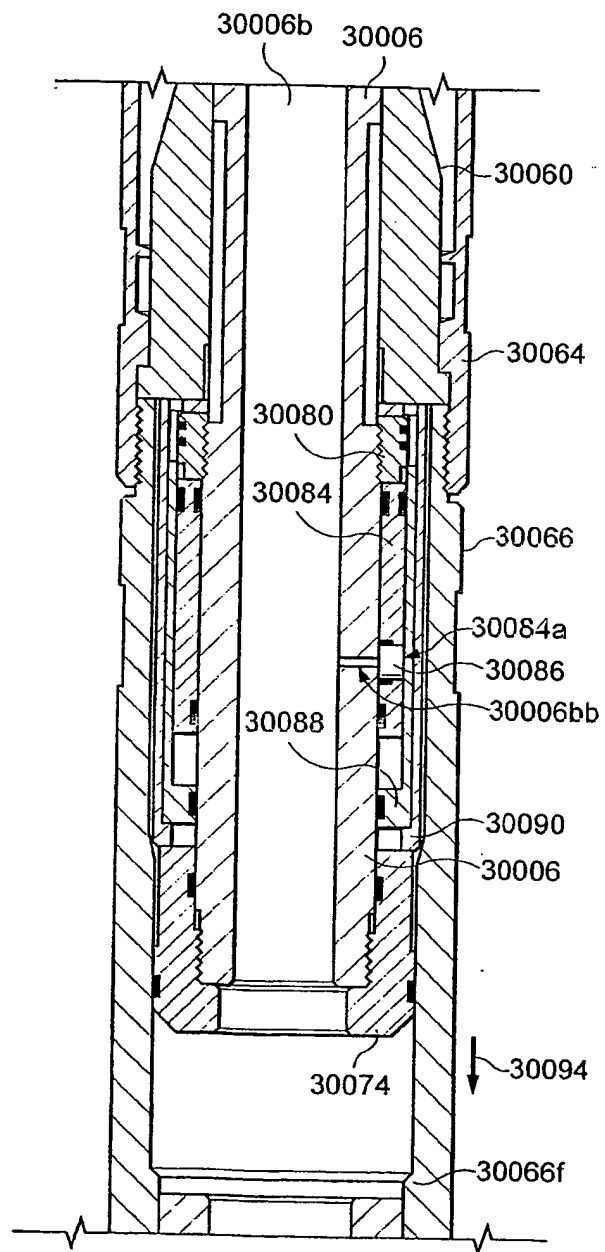


Fig. 16V

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Fig. 16W

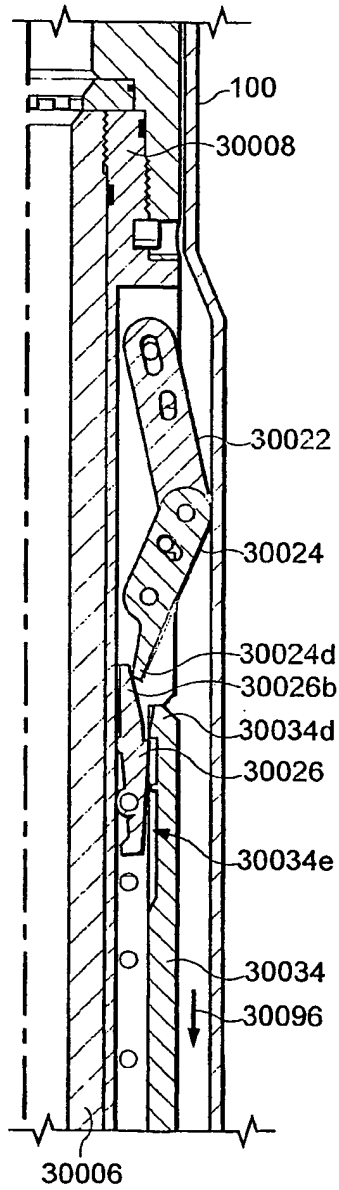


Fig. 16X

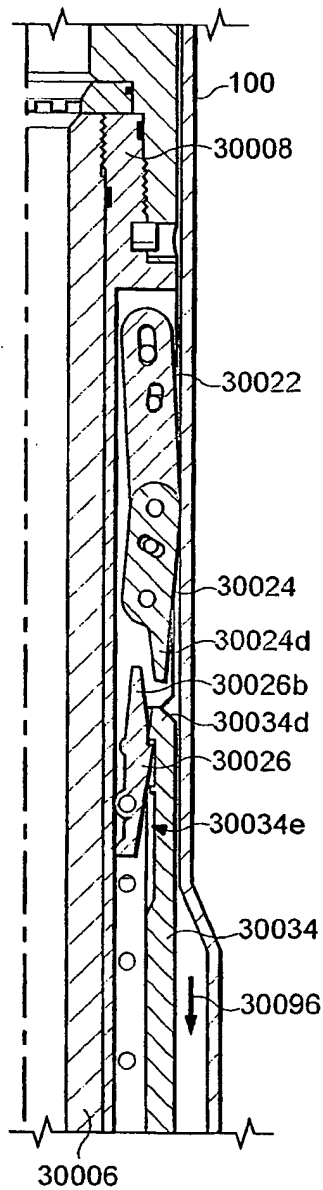
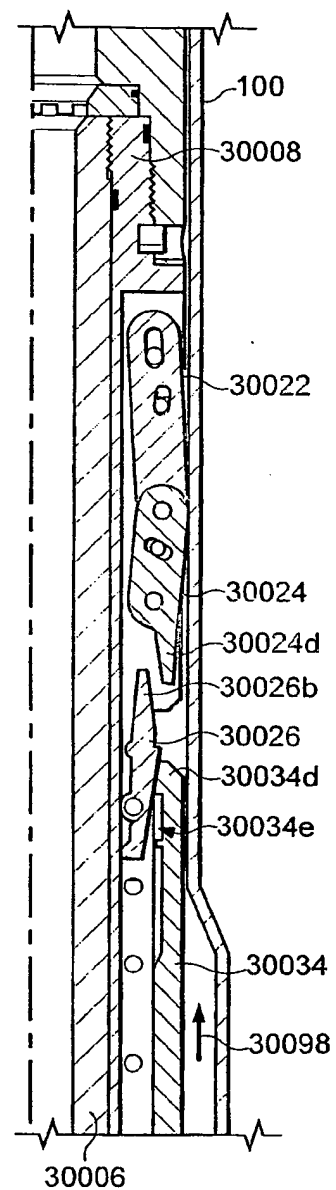


Fig. 16Y



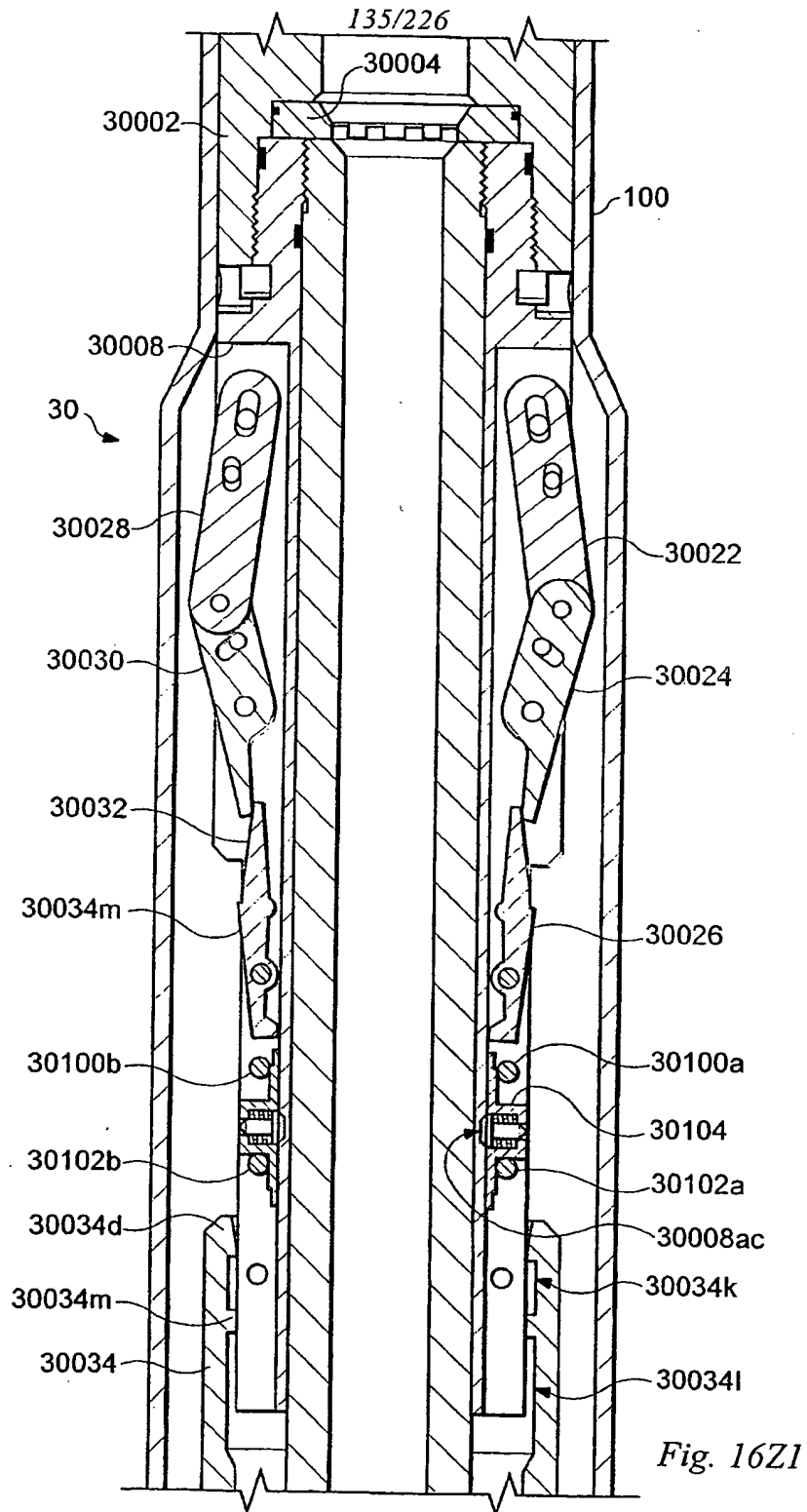


Fig. 16Z1

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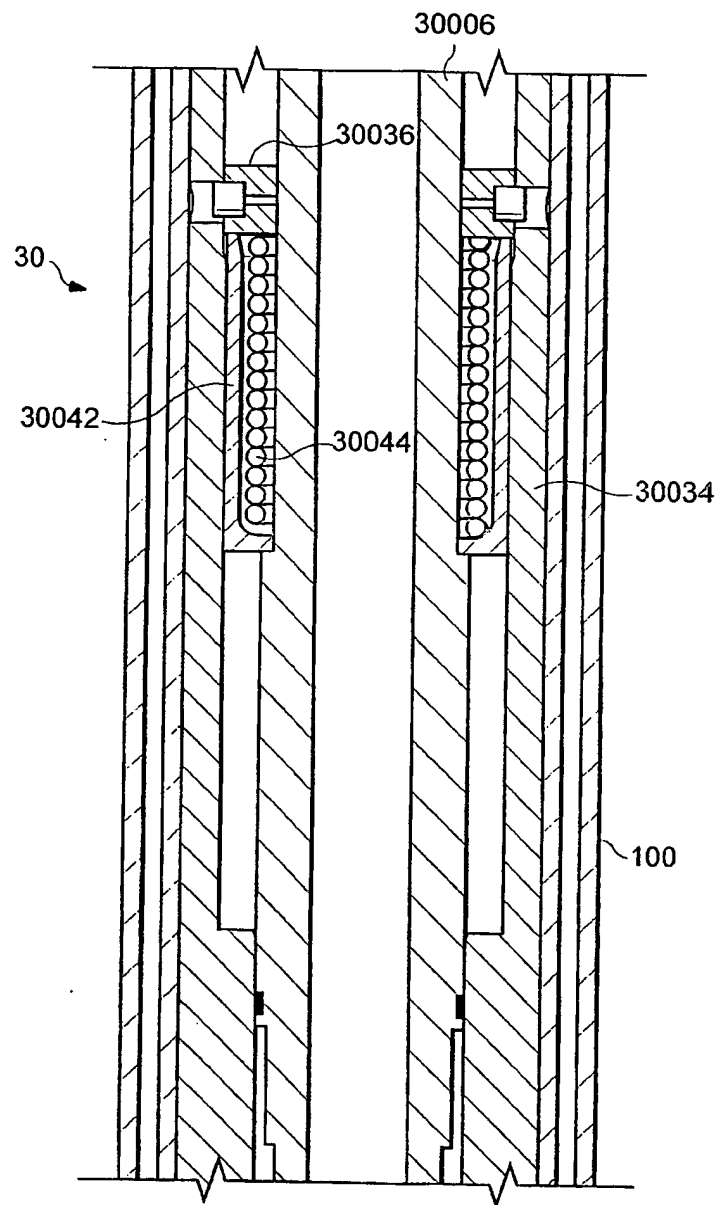


Fig. 16Z2

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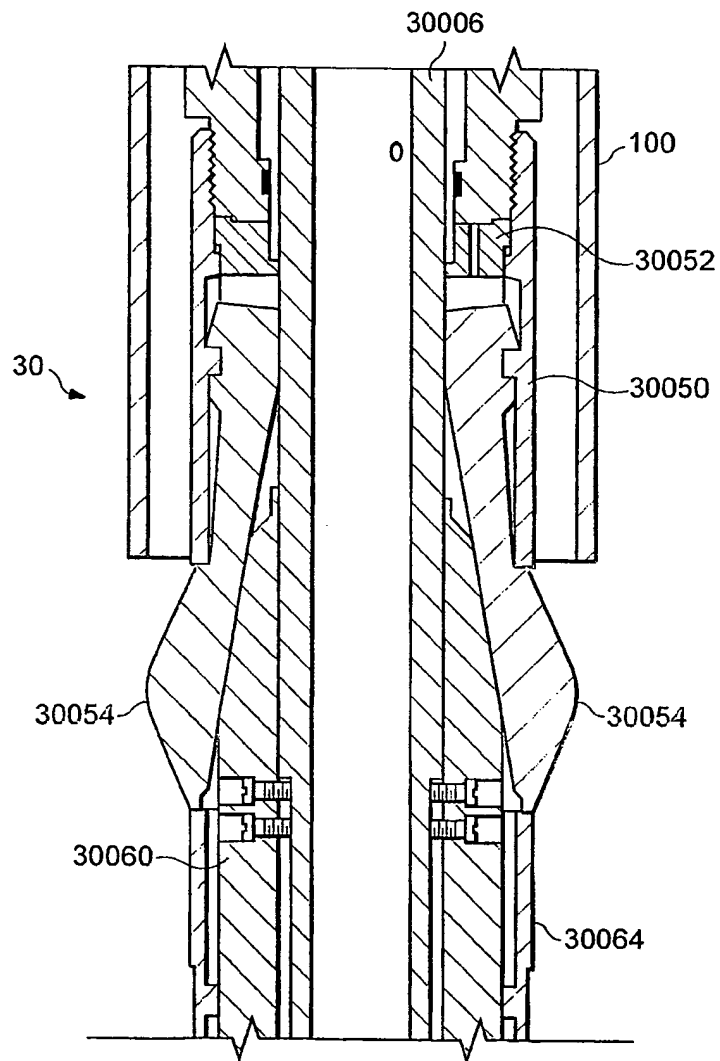


Fig. 16Z3

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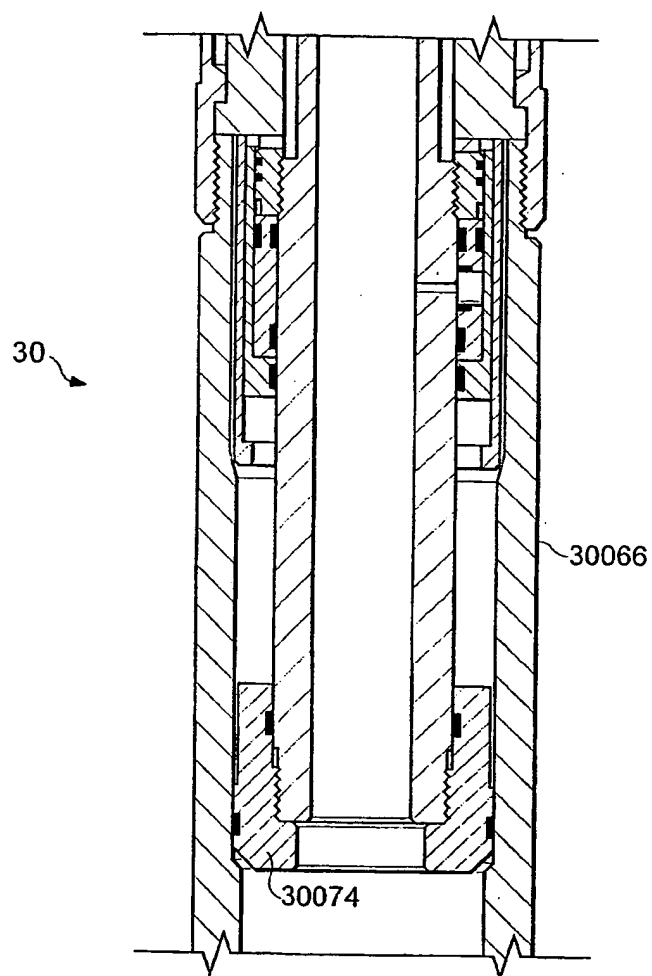


Fig. 16Z4

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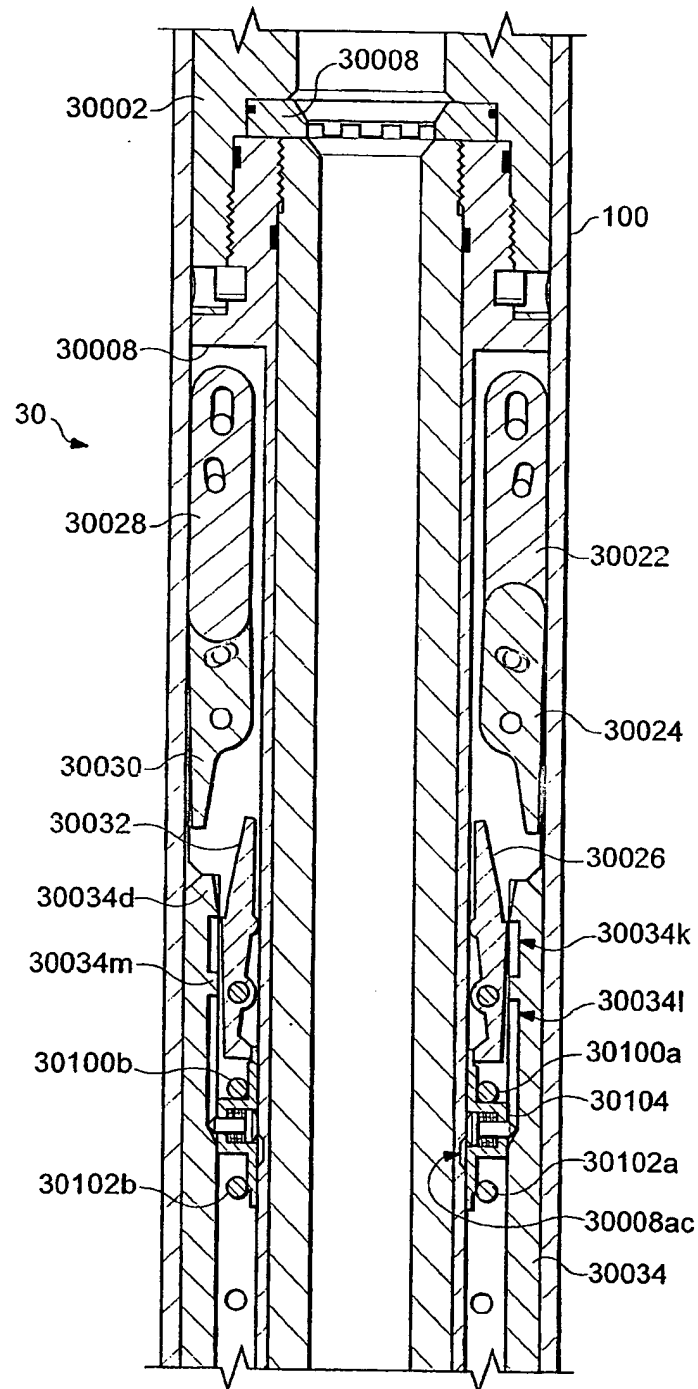


Fig. 16AA1

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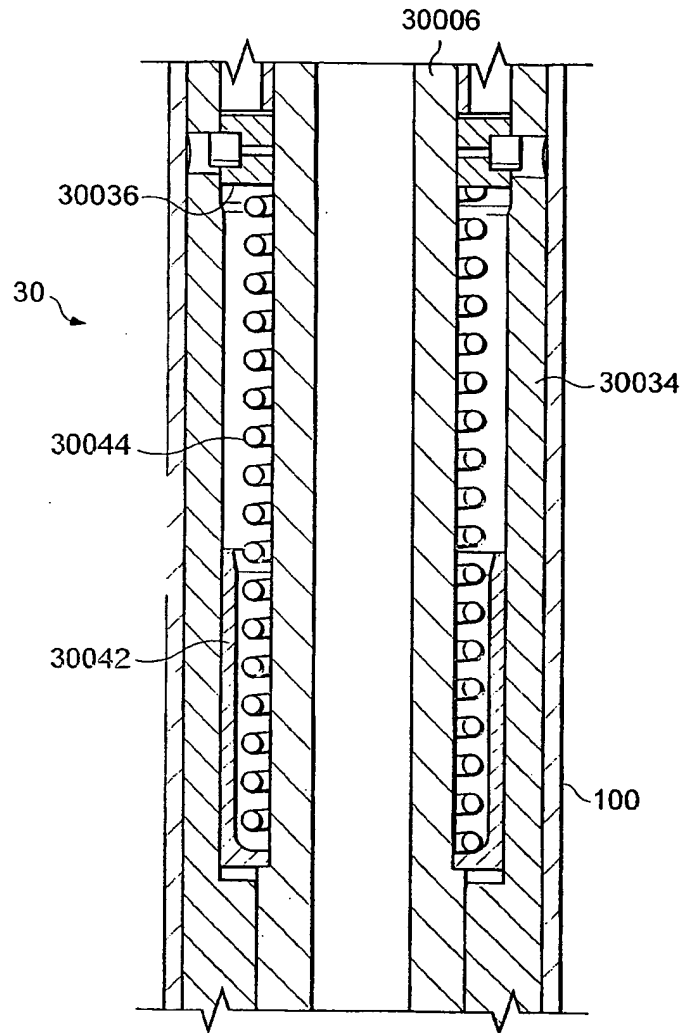


Fig. 16AA2

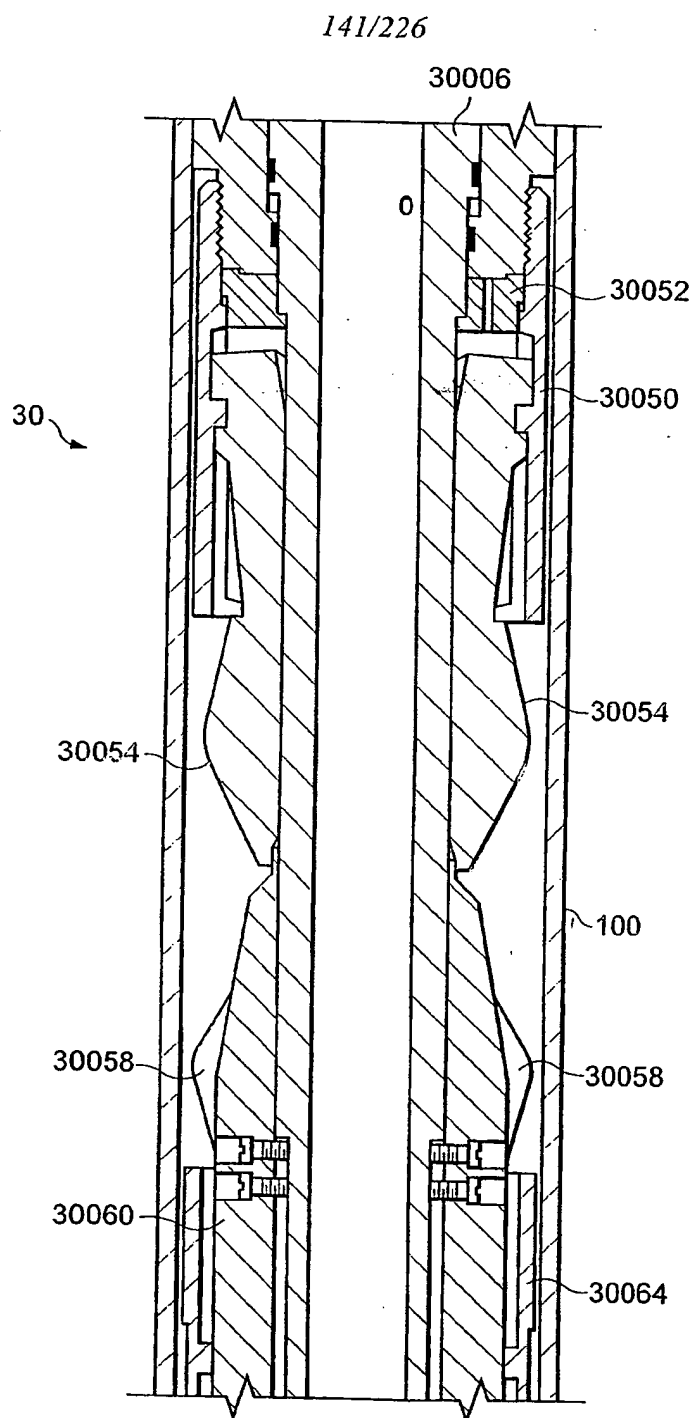


Fig. 16AA3

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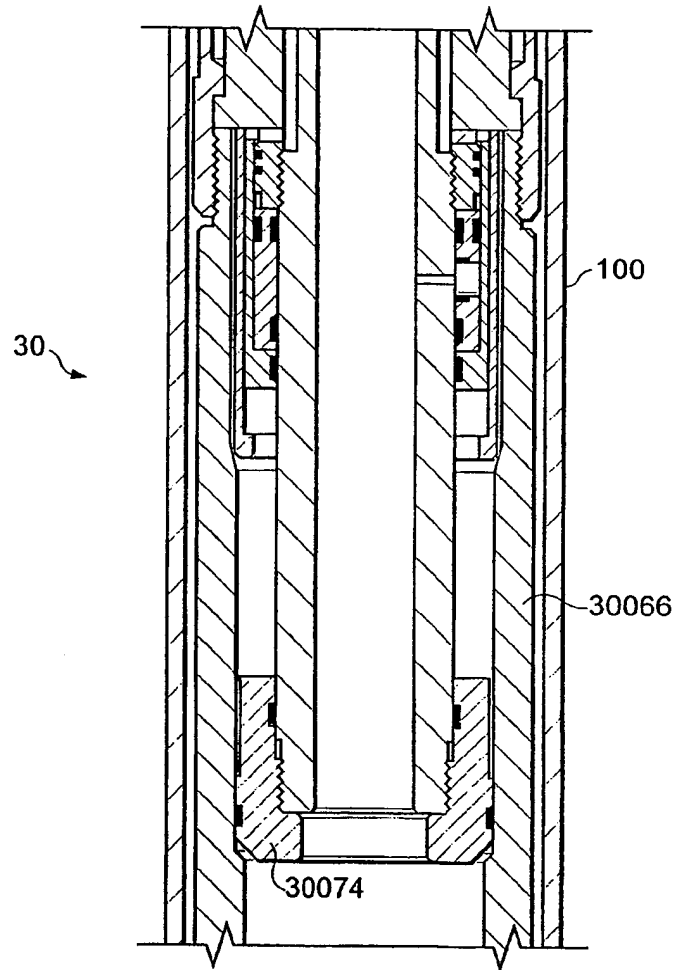


Fig. 16AA4

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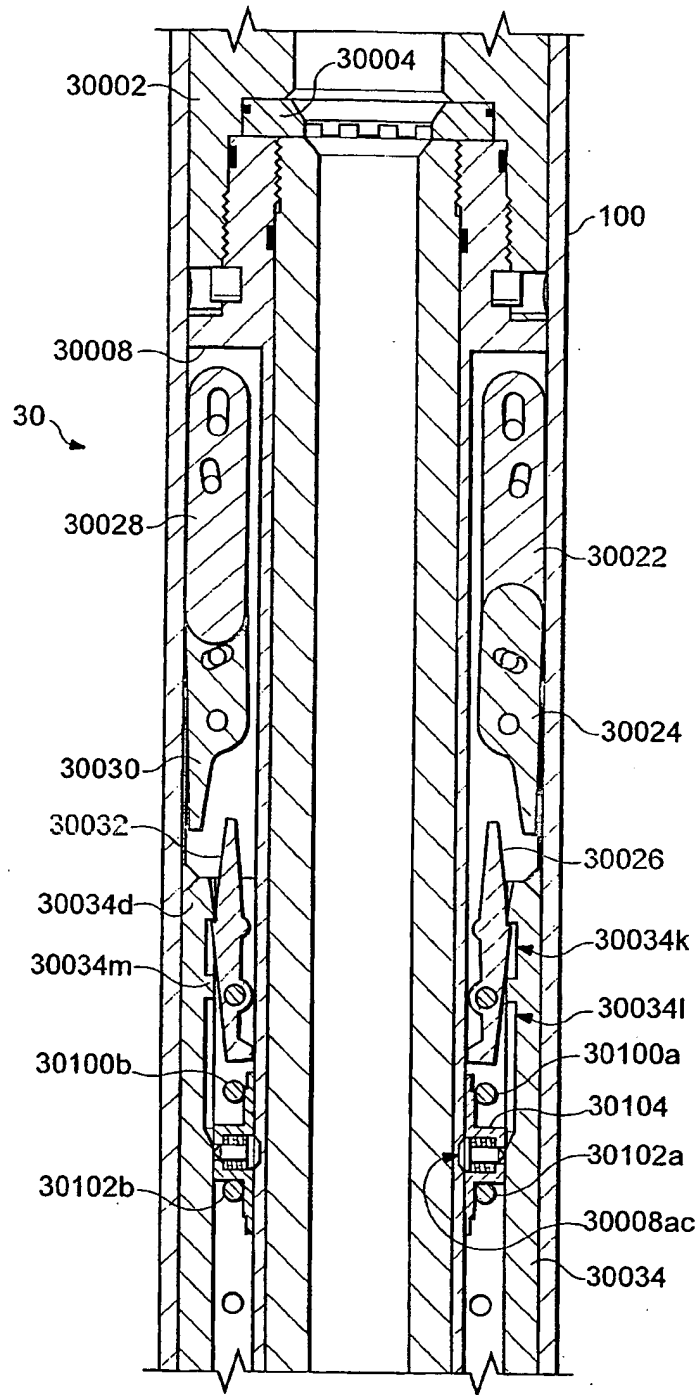


Fig. 16AB1

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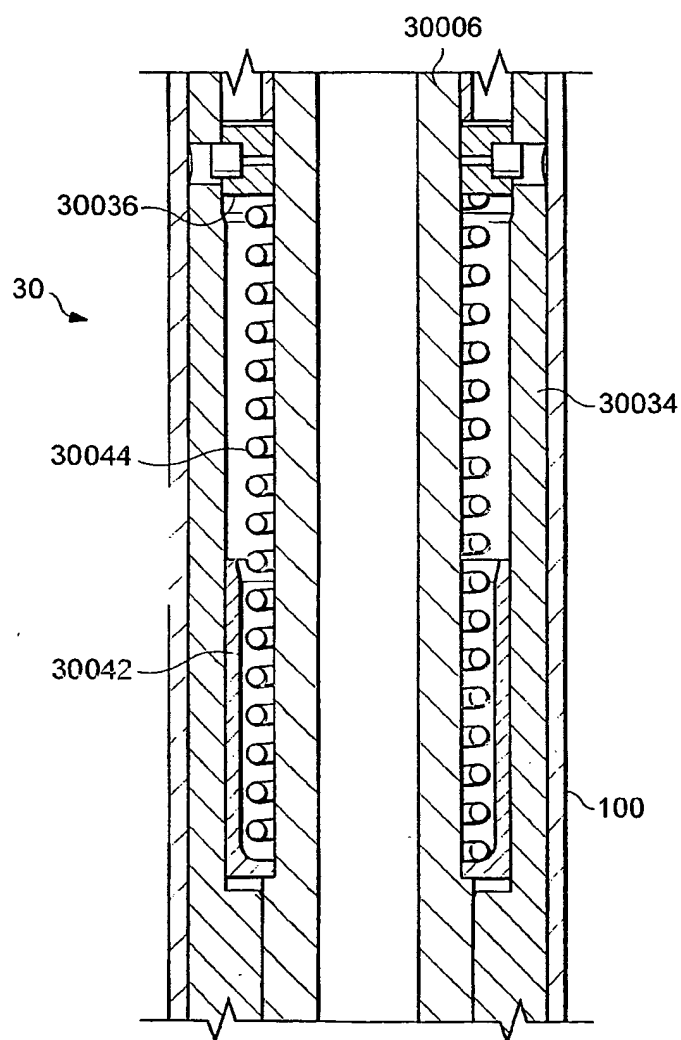


Fig. 16AB2

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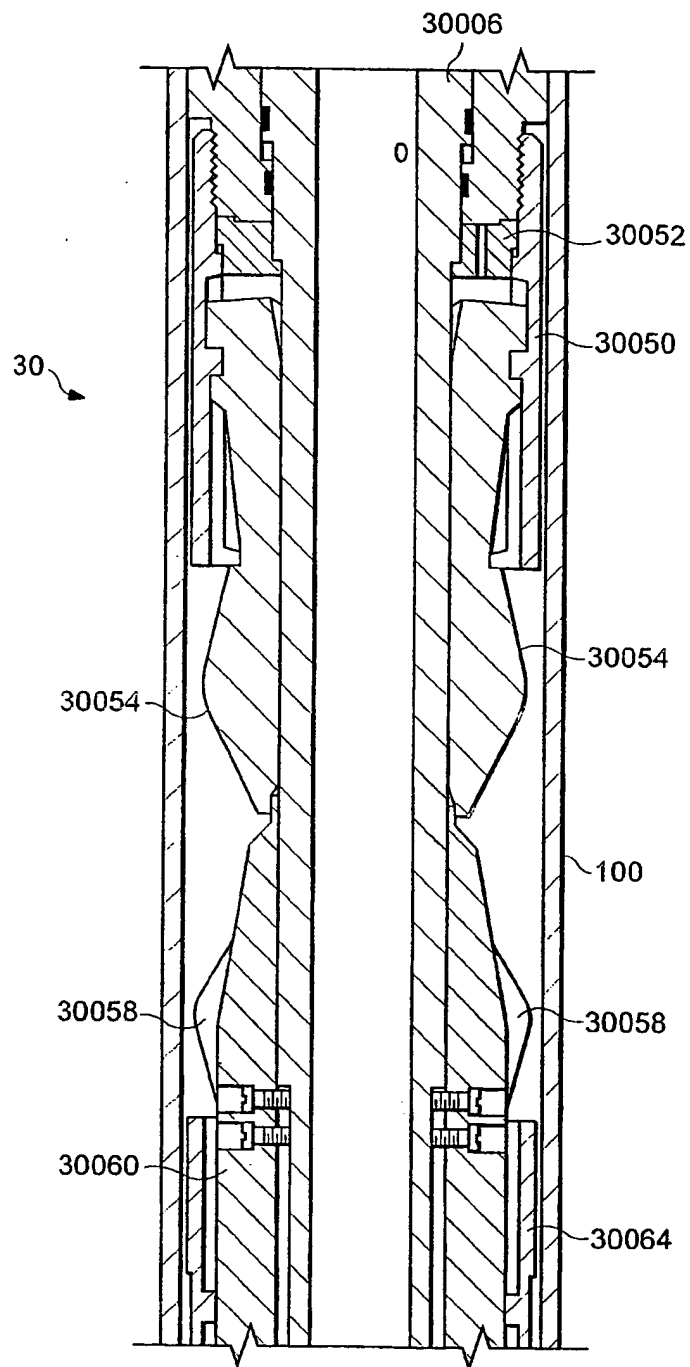


Fig. 16AB3

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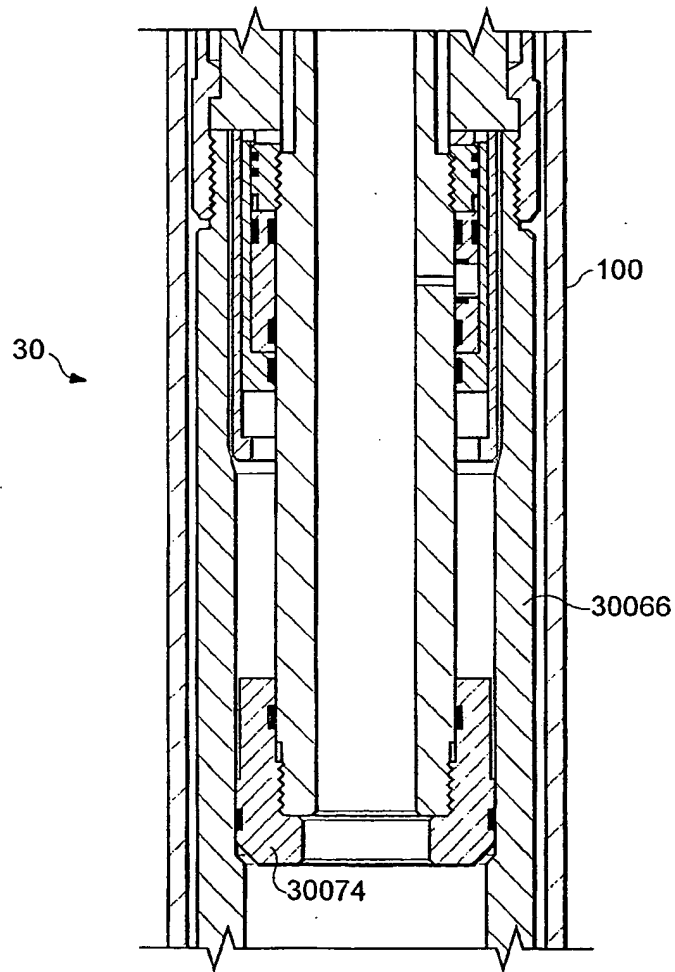


Fig. 16AB4

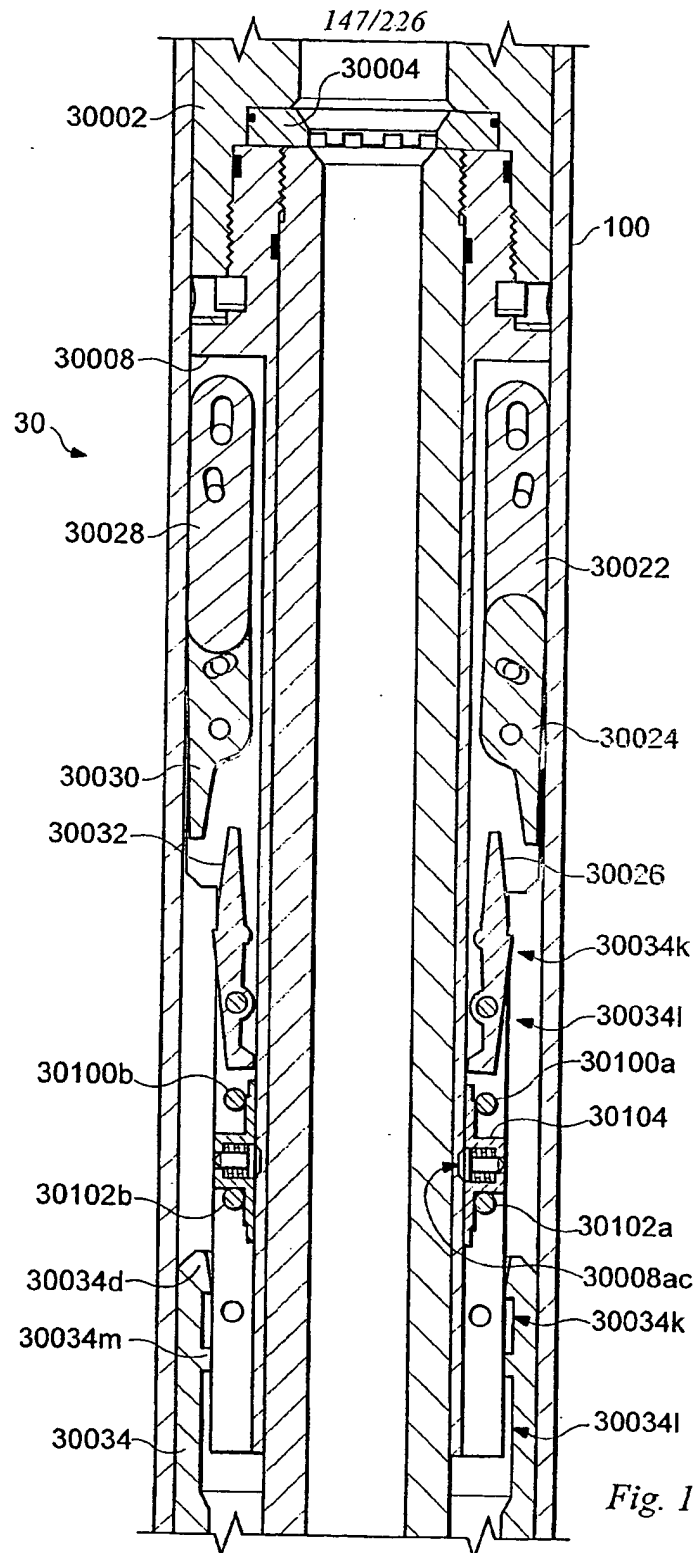


Fig. 16A1

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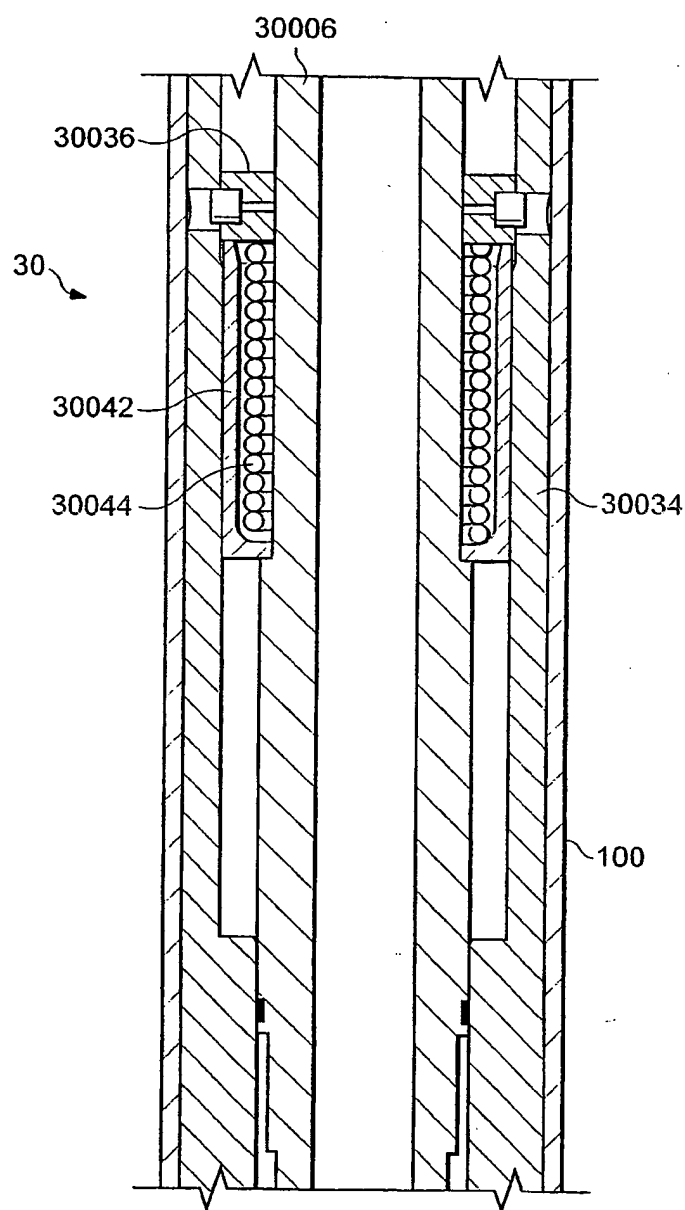


Fig. 16AC2

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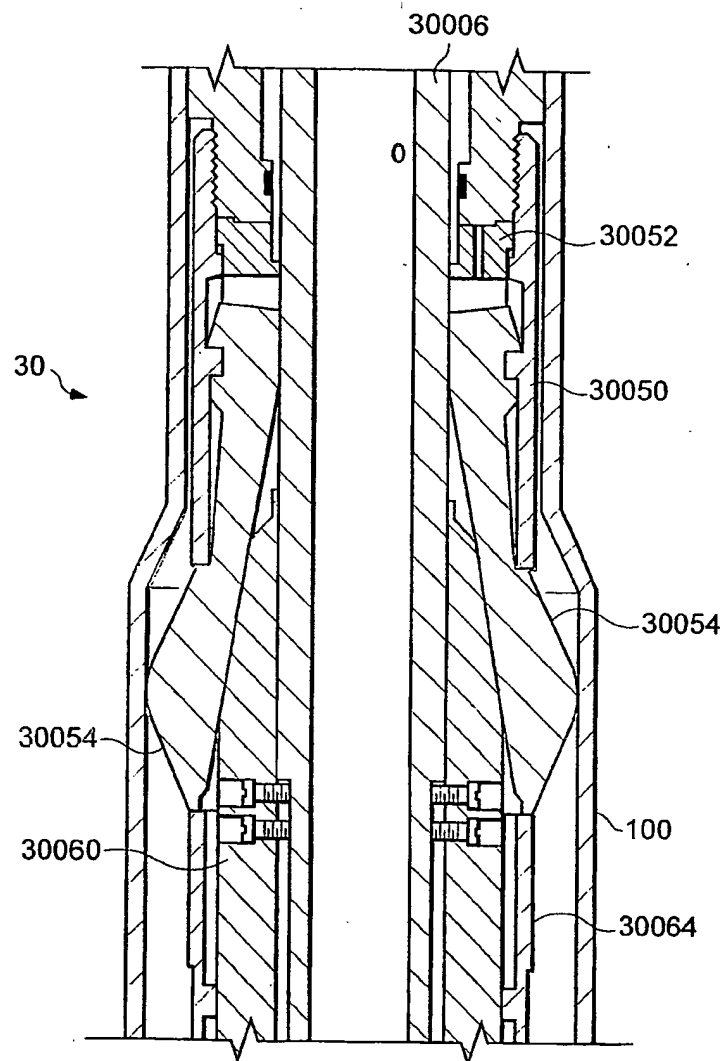


Fig. 16AC3

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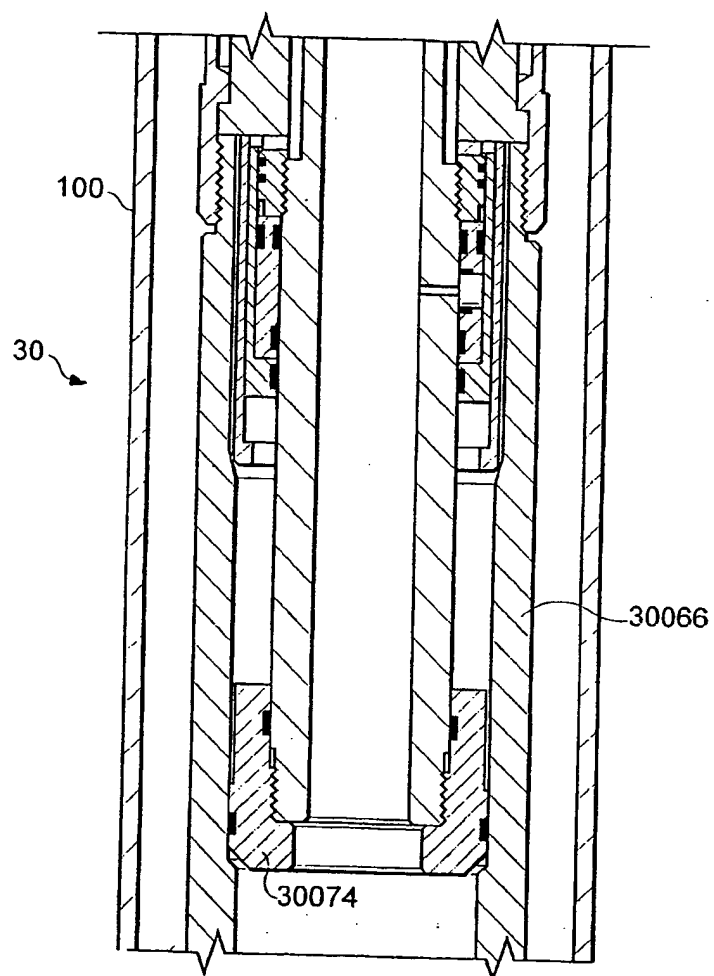


Fig. 16AC4

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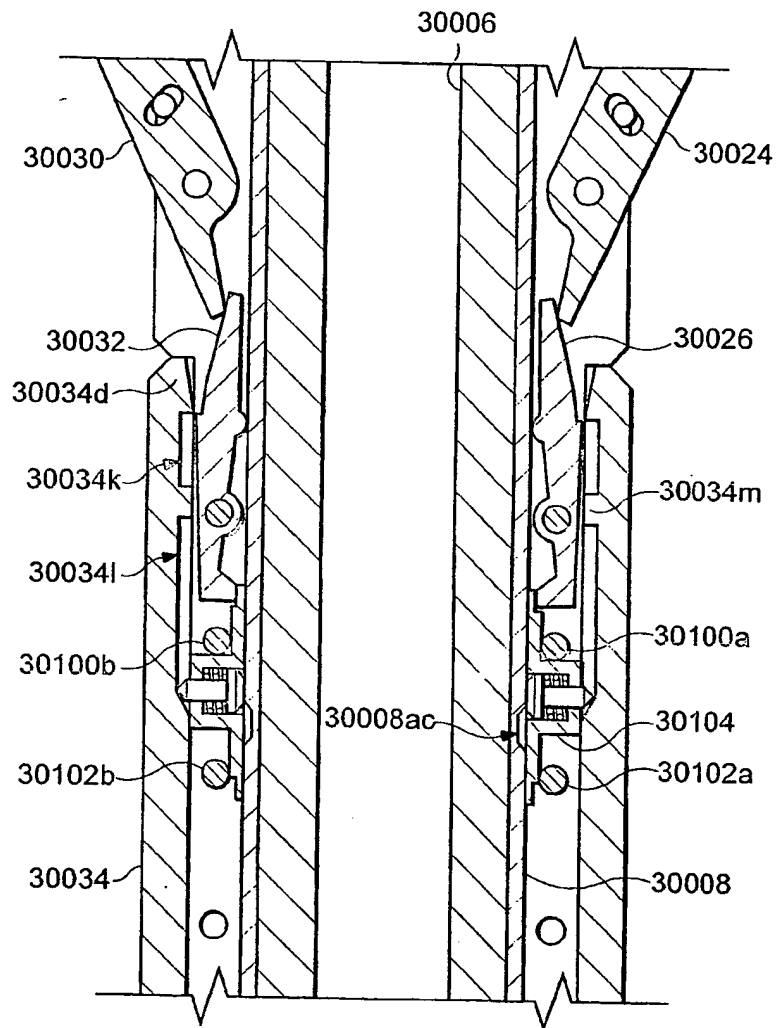


Fig. 16AD

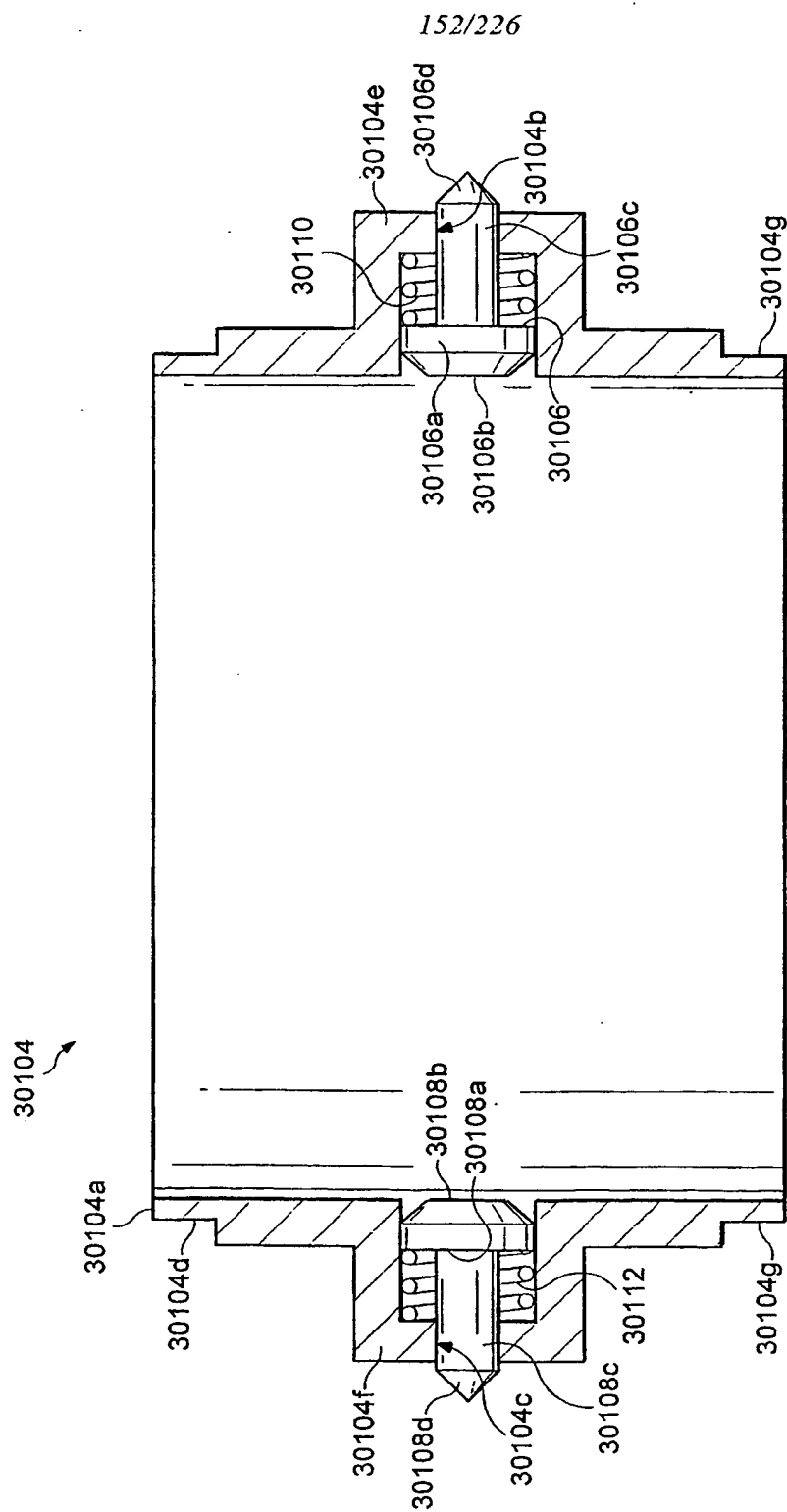


Fig. 16AE

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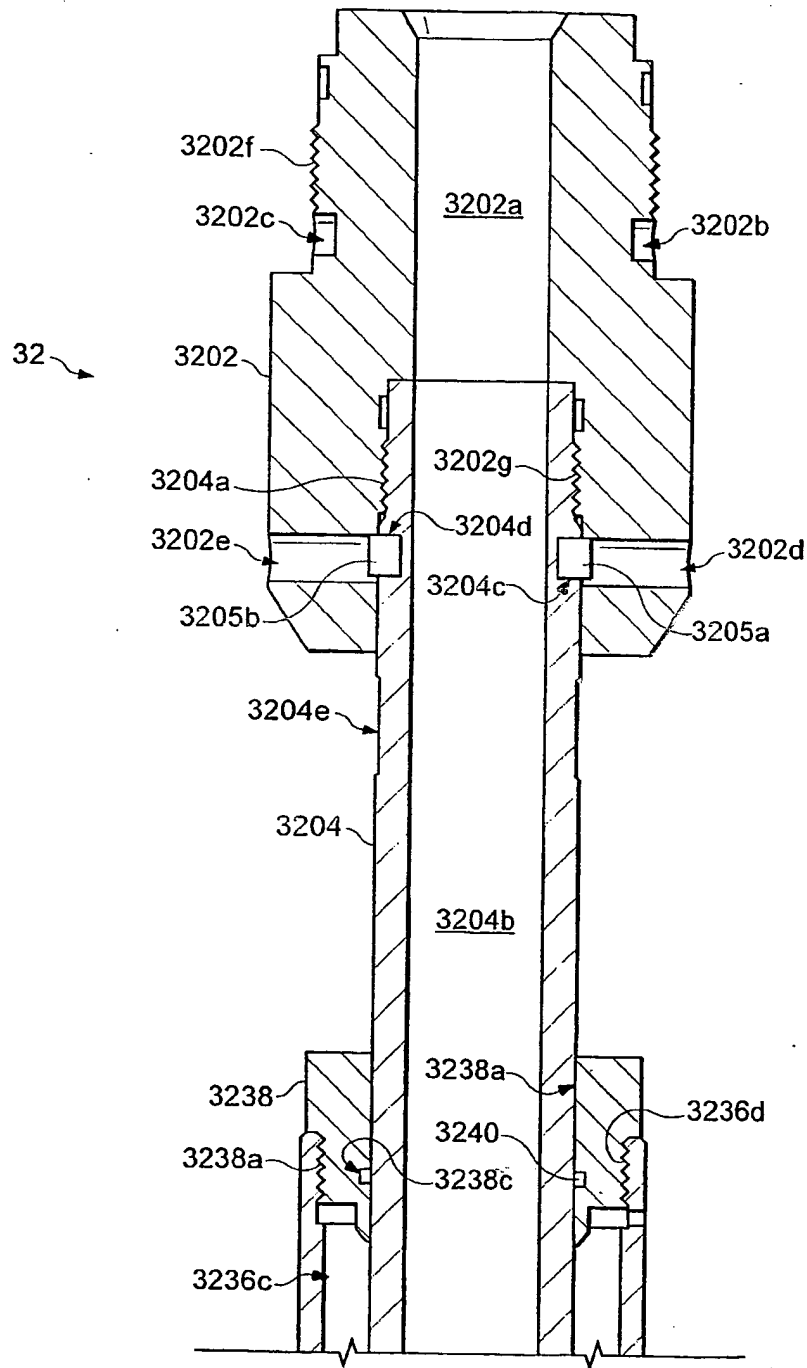
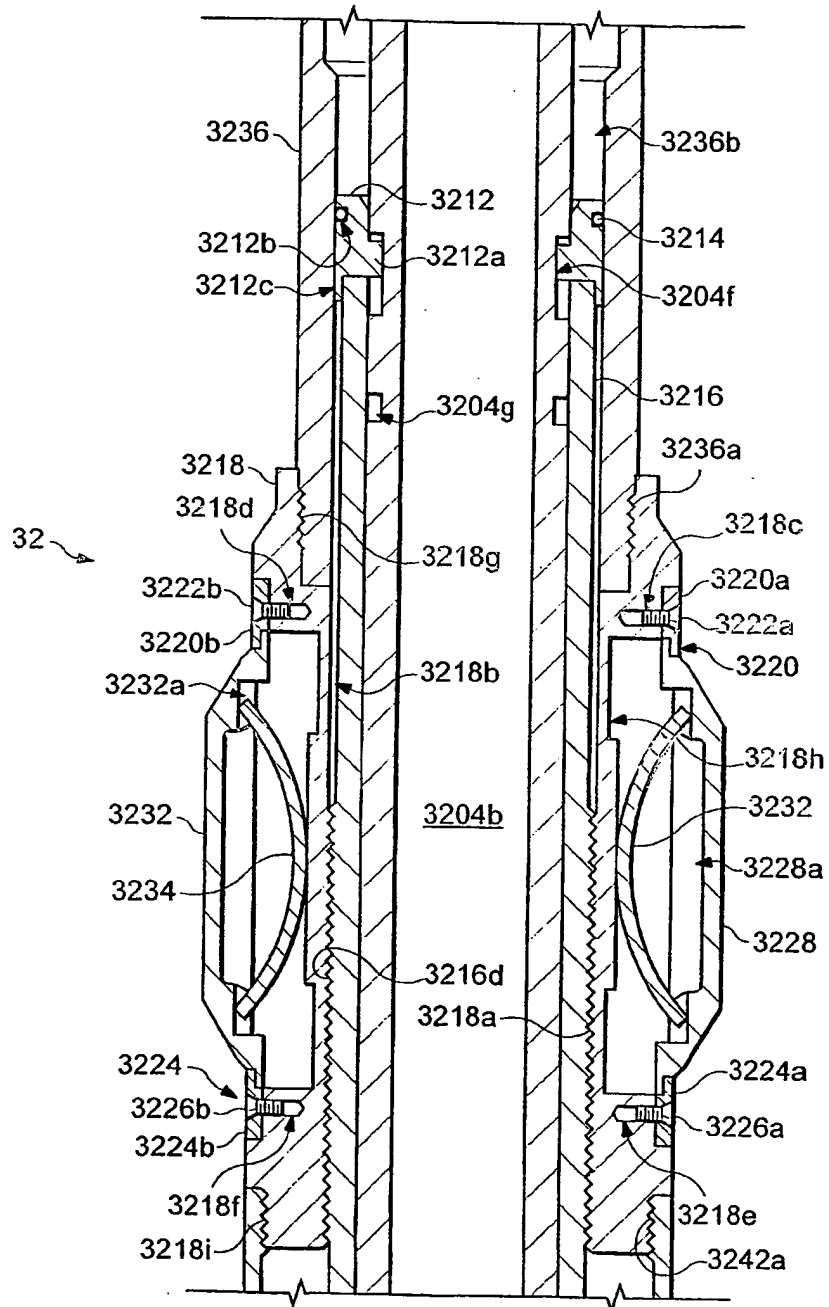


Fig. 17A

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*Fig. 17B*

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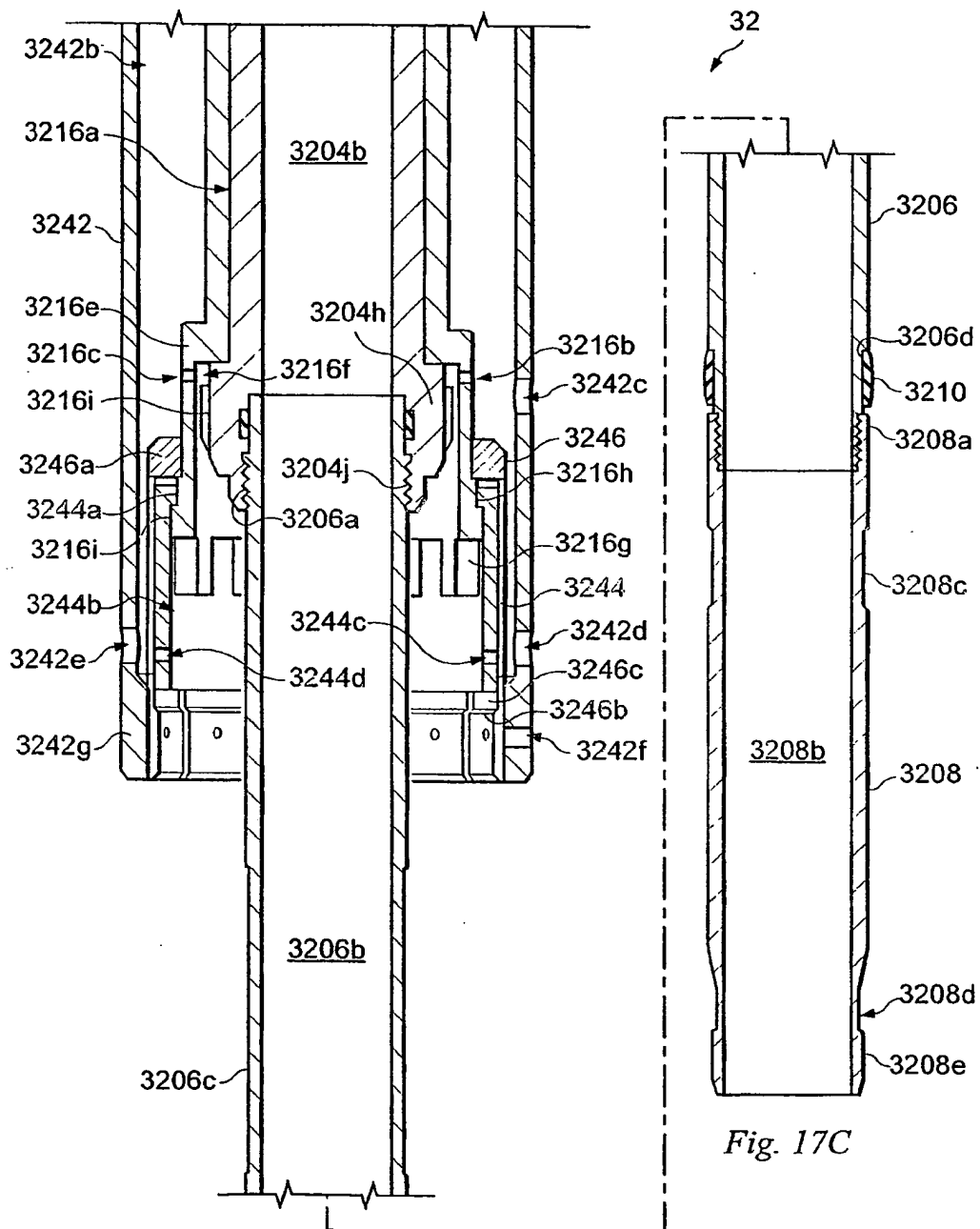


Fig. 17C

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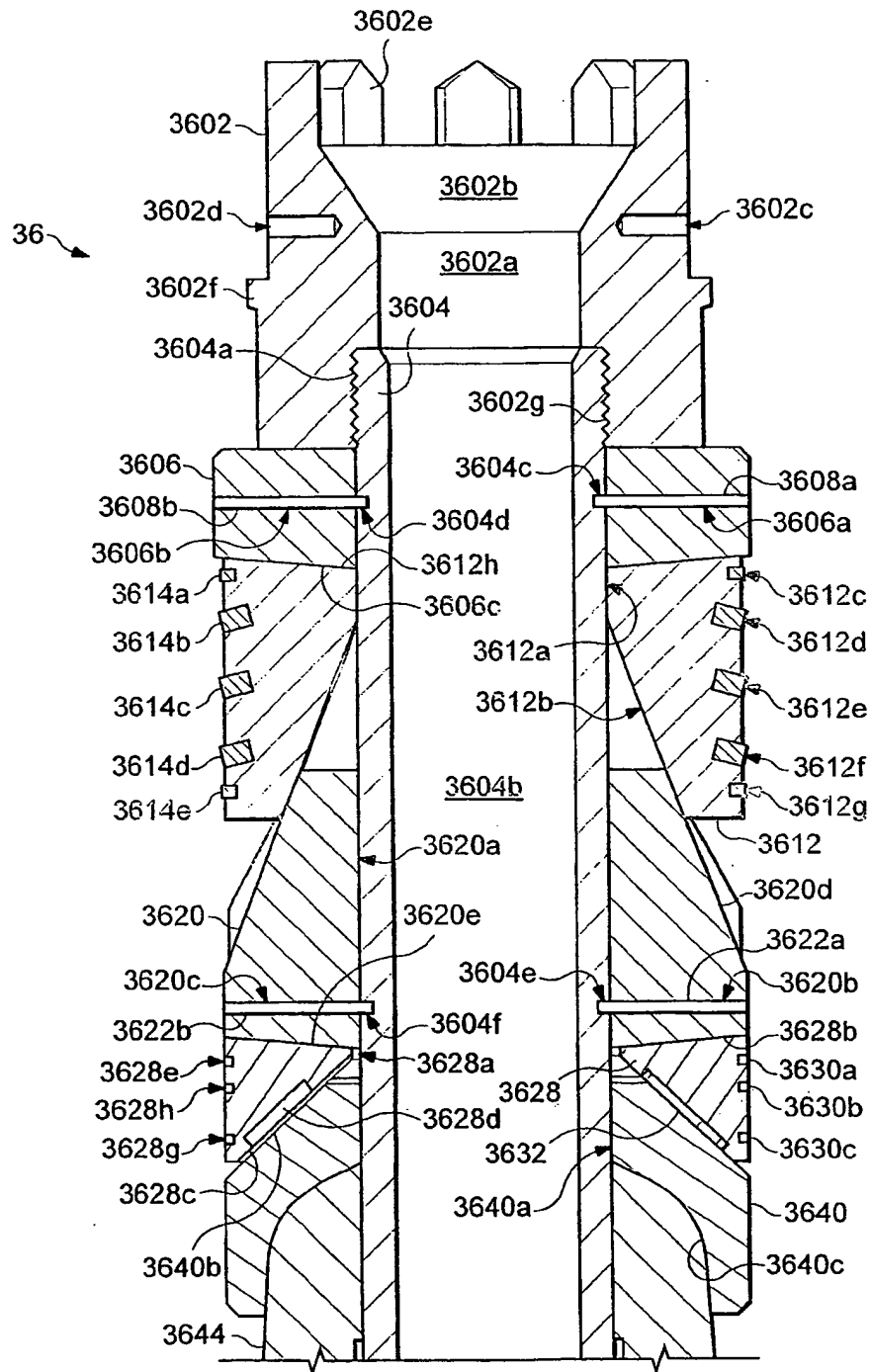


Fig. 18-1

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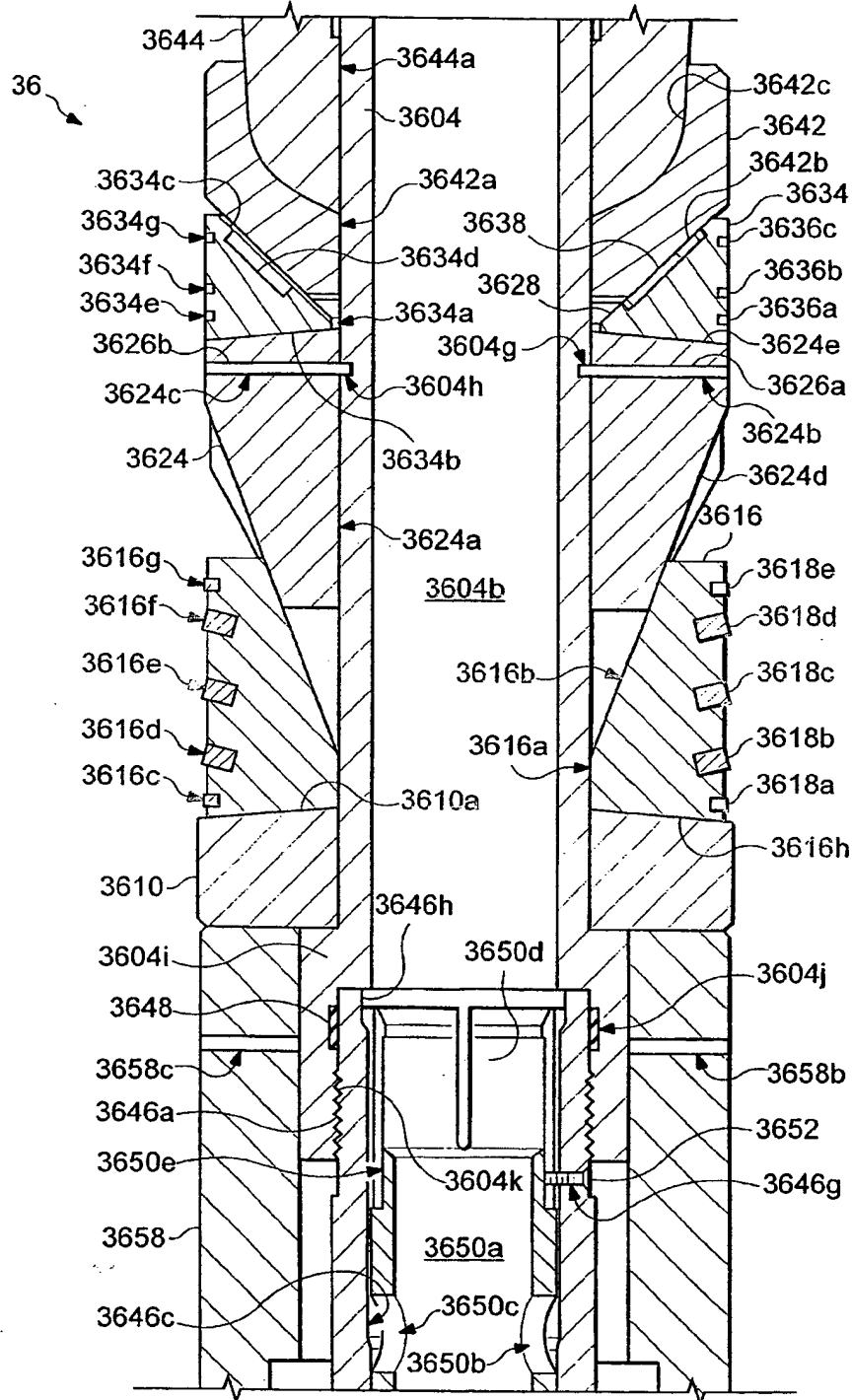


Fig. 18-2

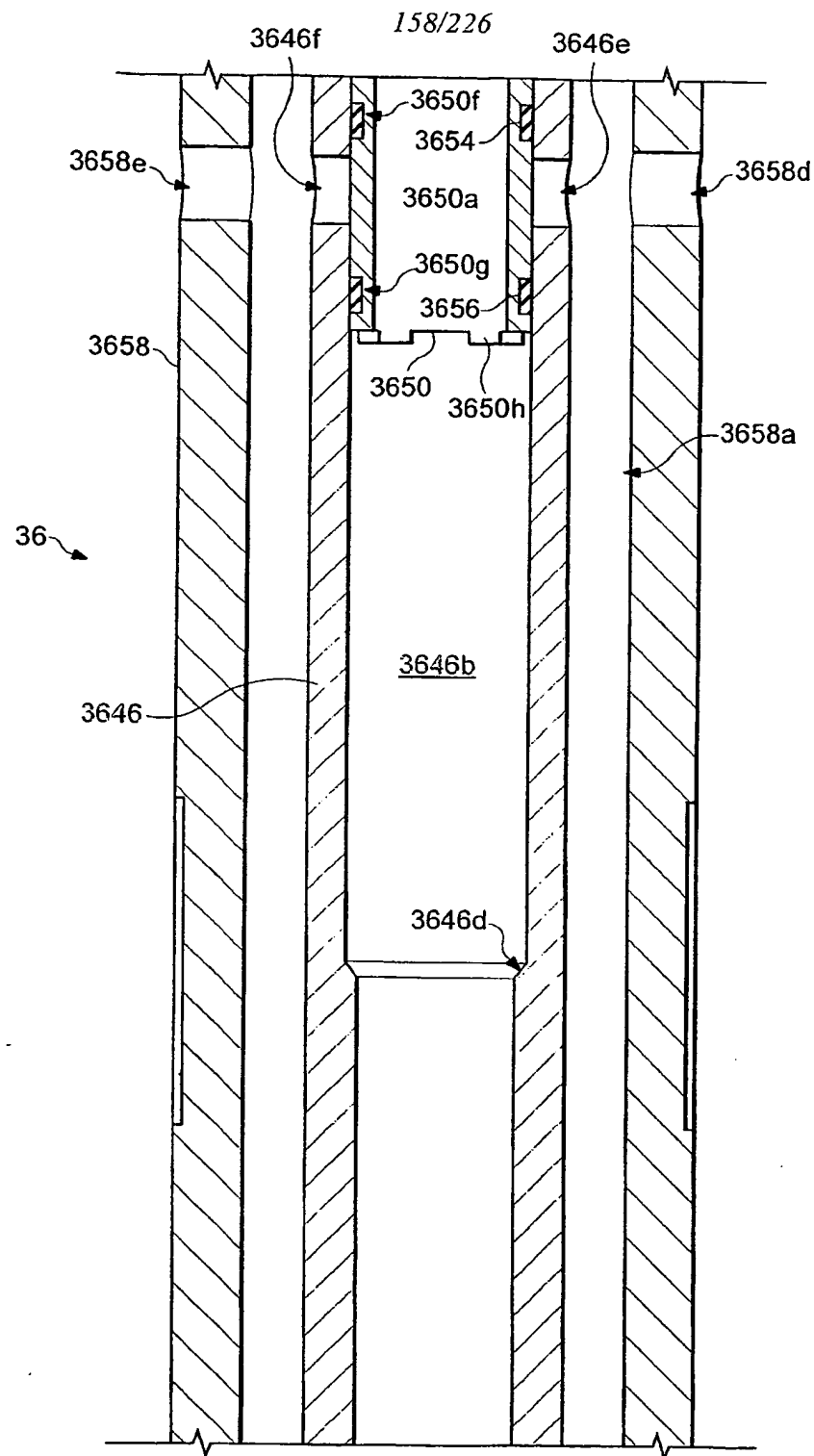


Fig. 18-3

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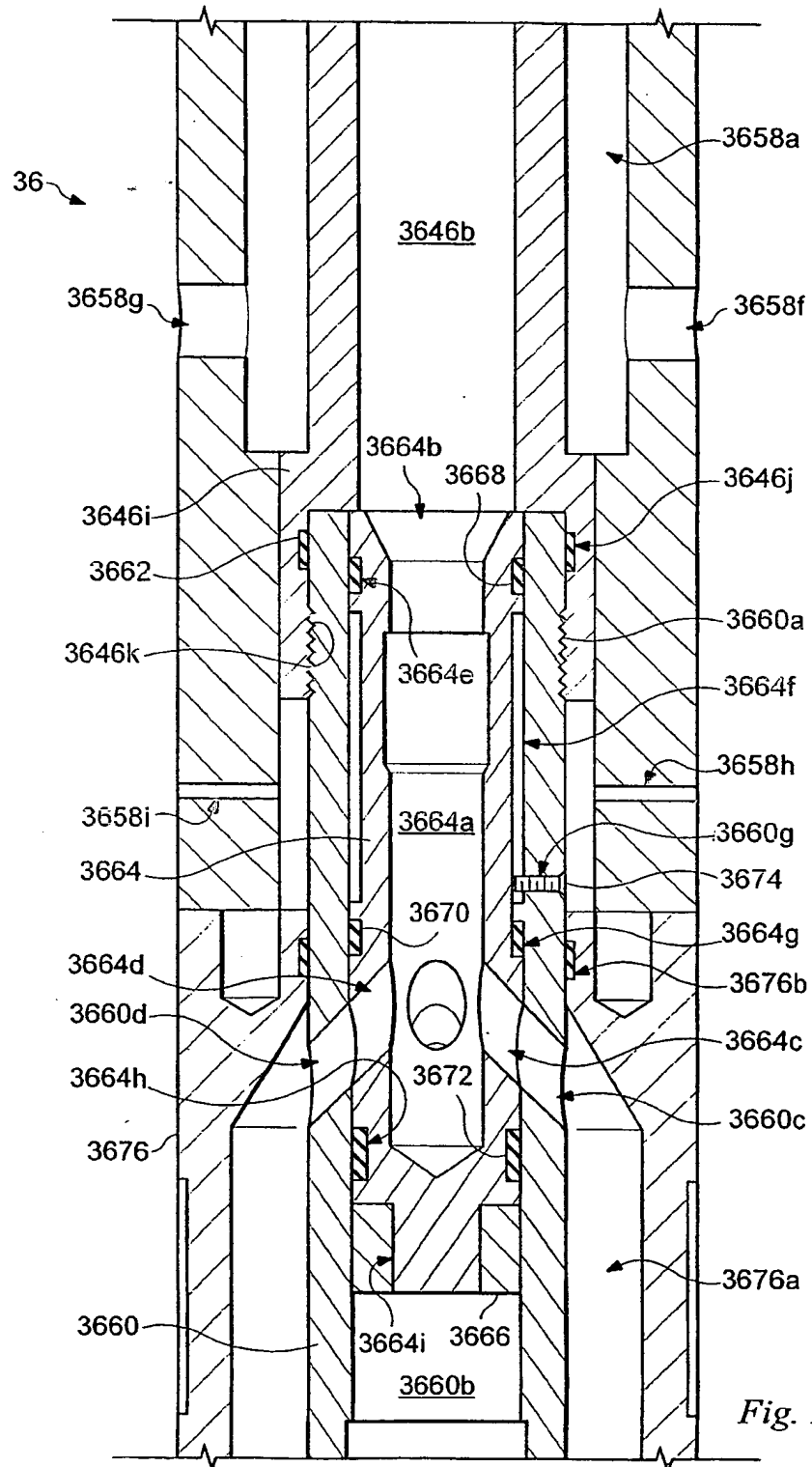


Fig. 18-4

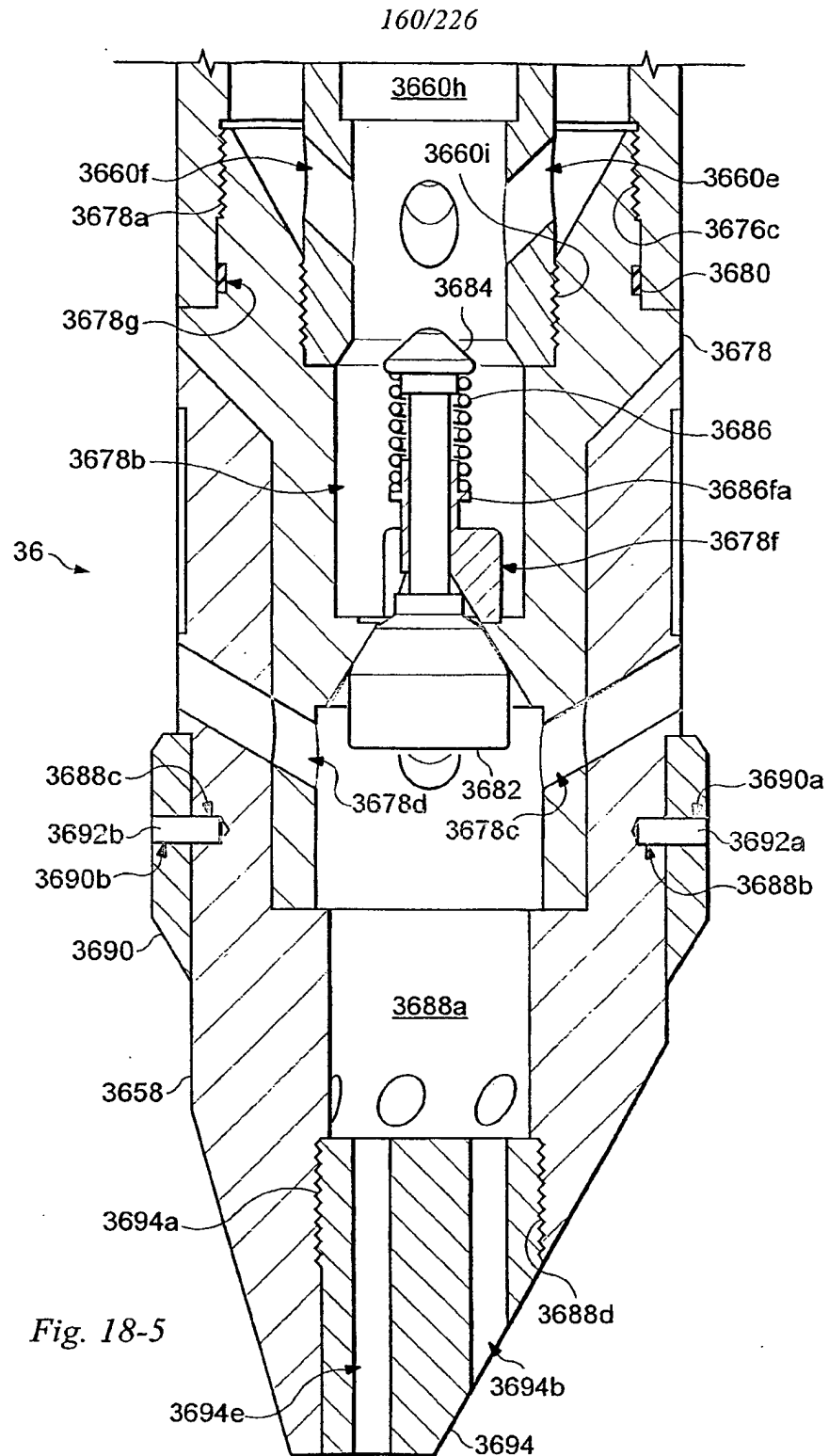


Fig. 18-5

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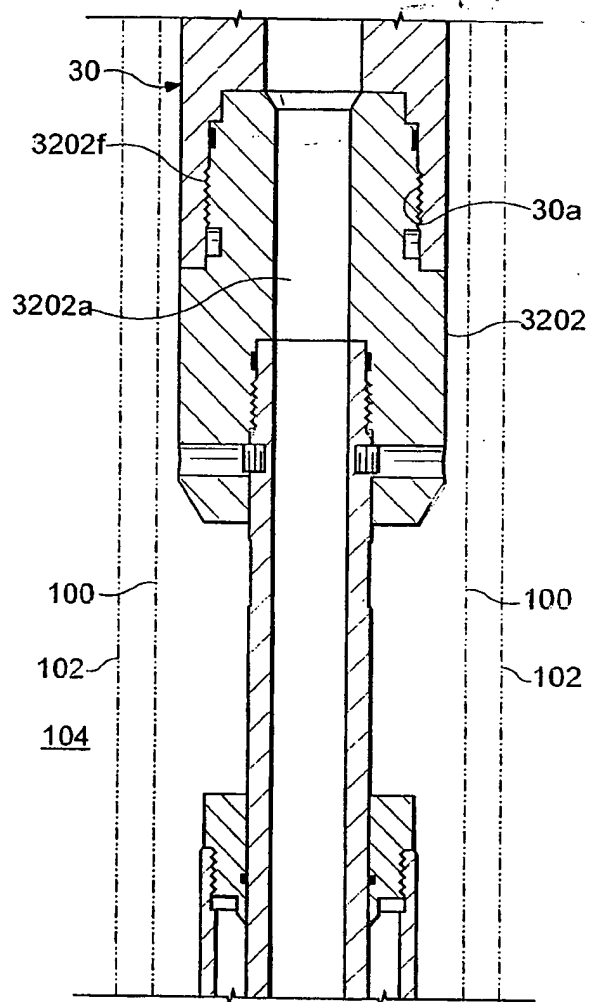


Fig. 19A1

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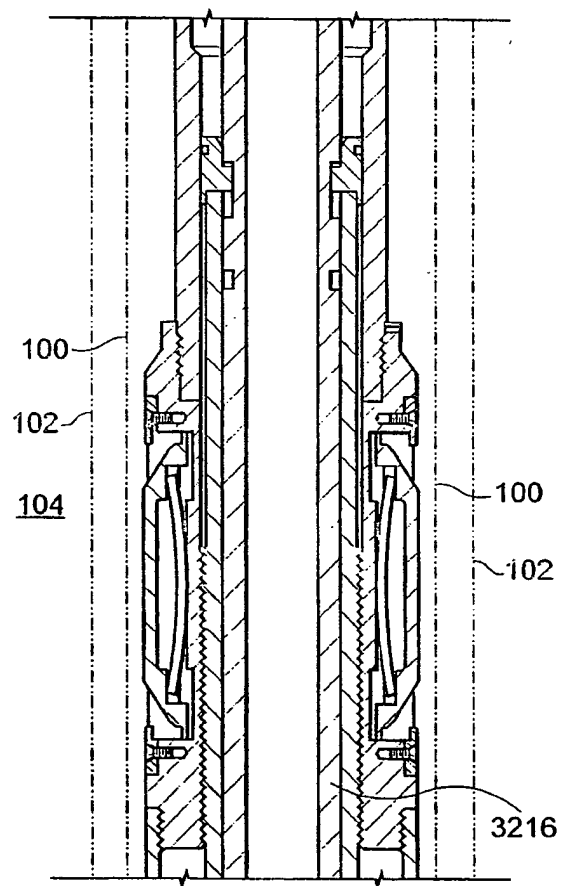


Fig. 19A2

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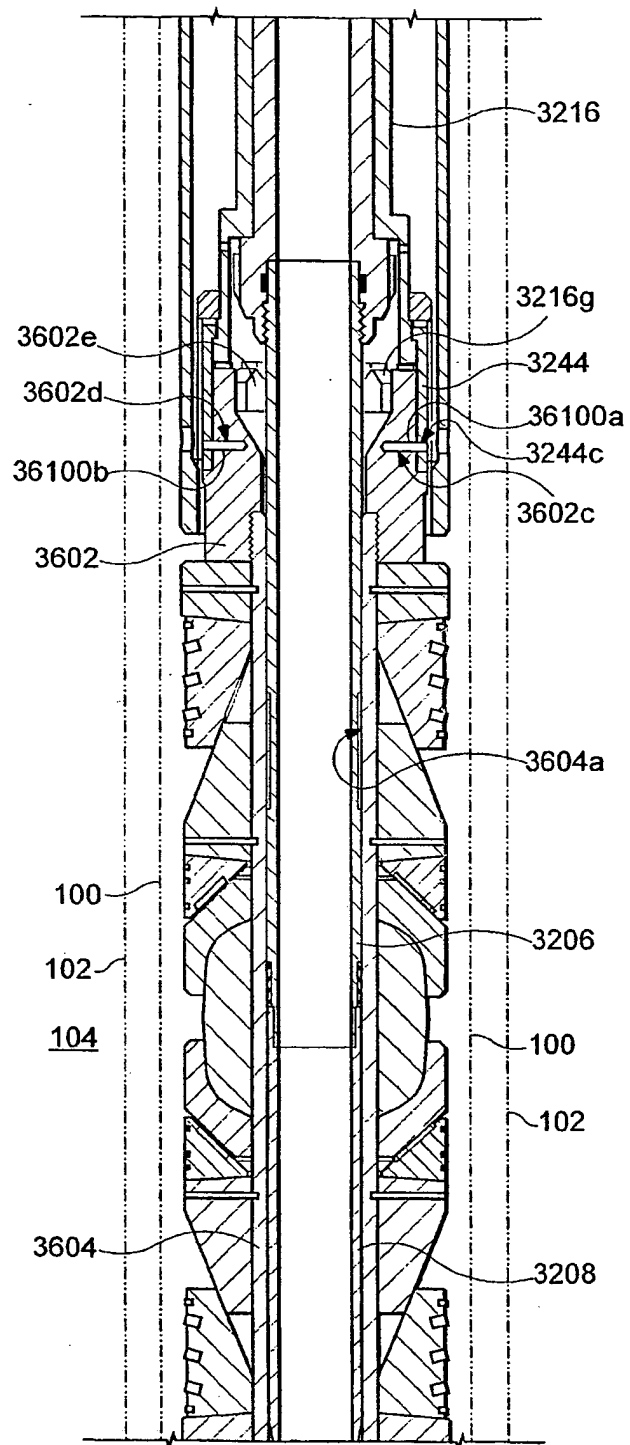


Fig. 19A3

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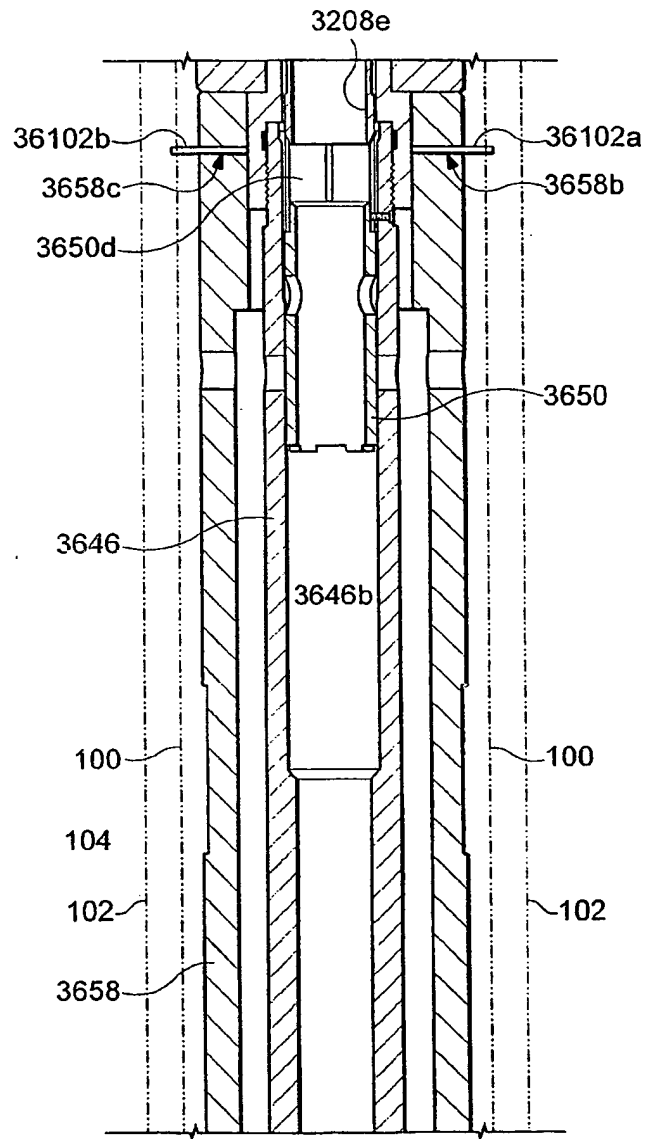


Fig. 19A4

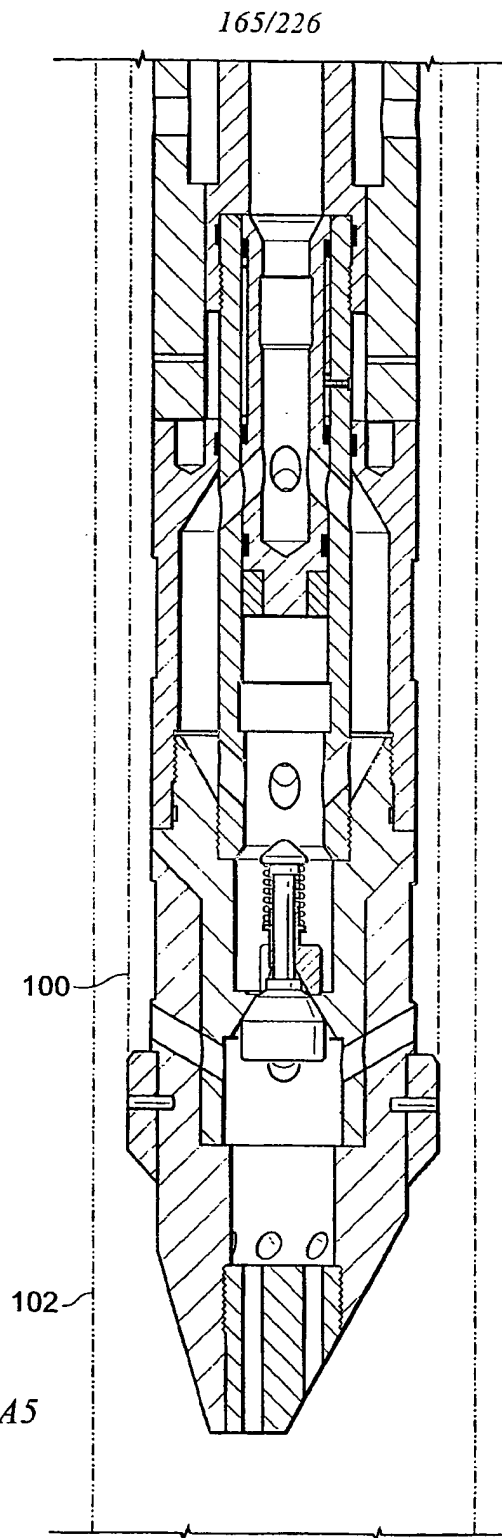


Fig. 19A5

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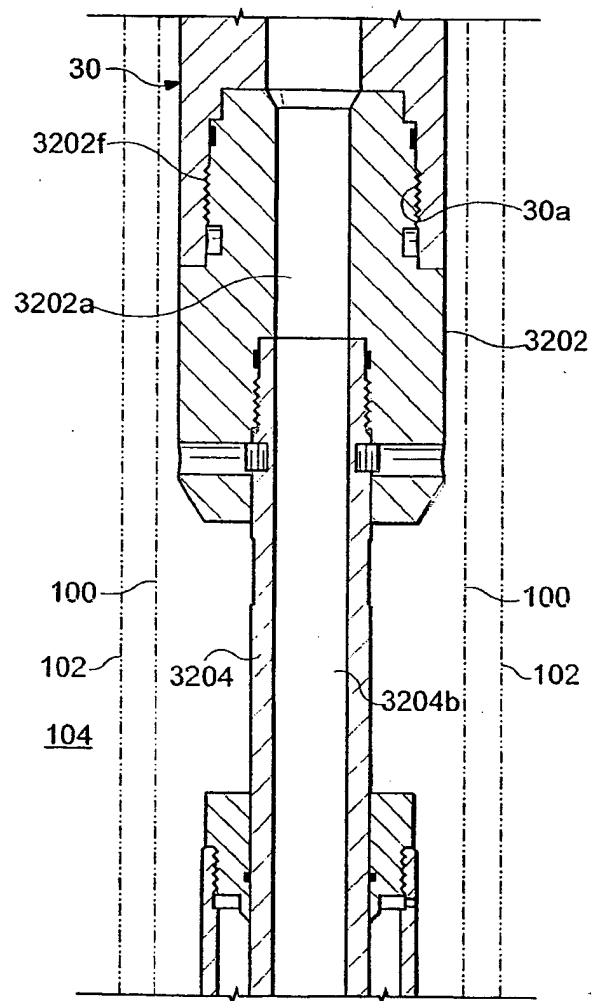


Fig. 19B1

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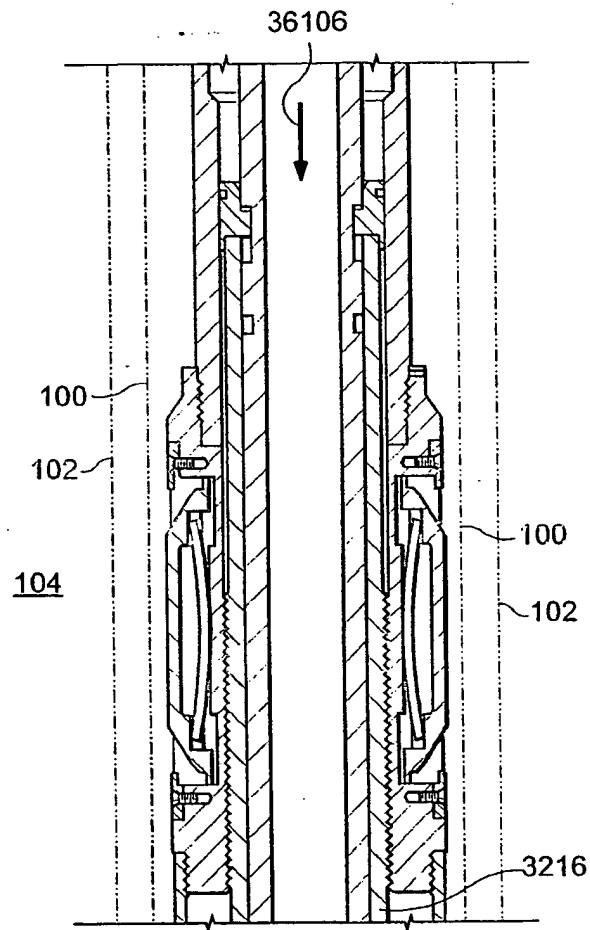


Fig. 19B2

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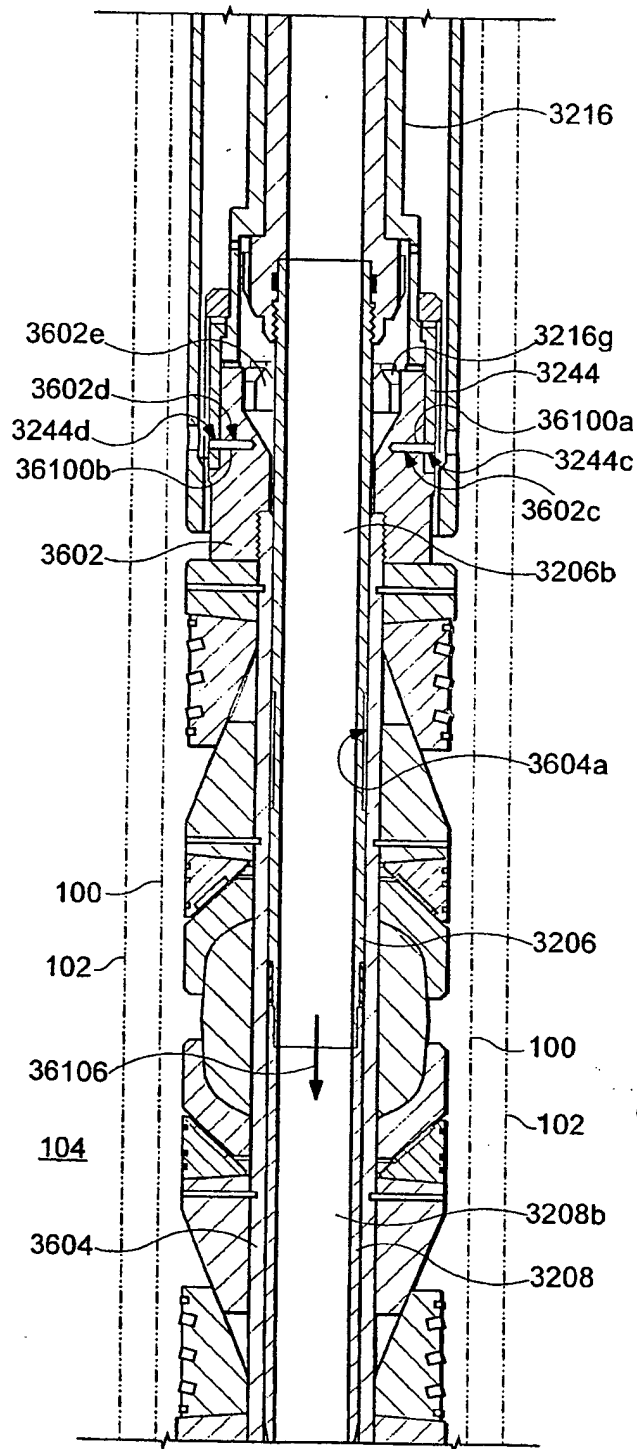
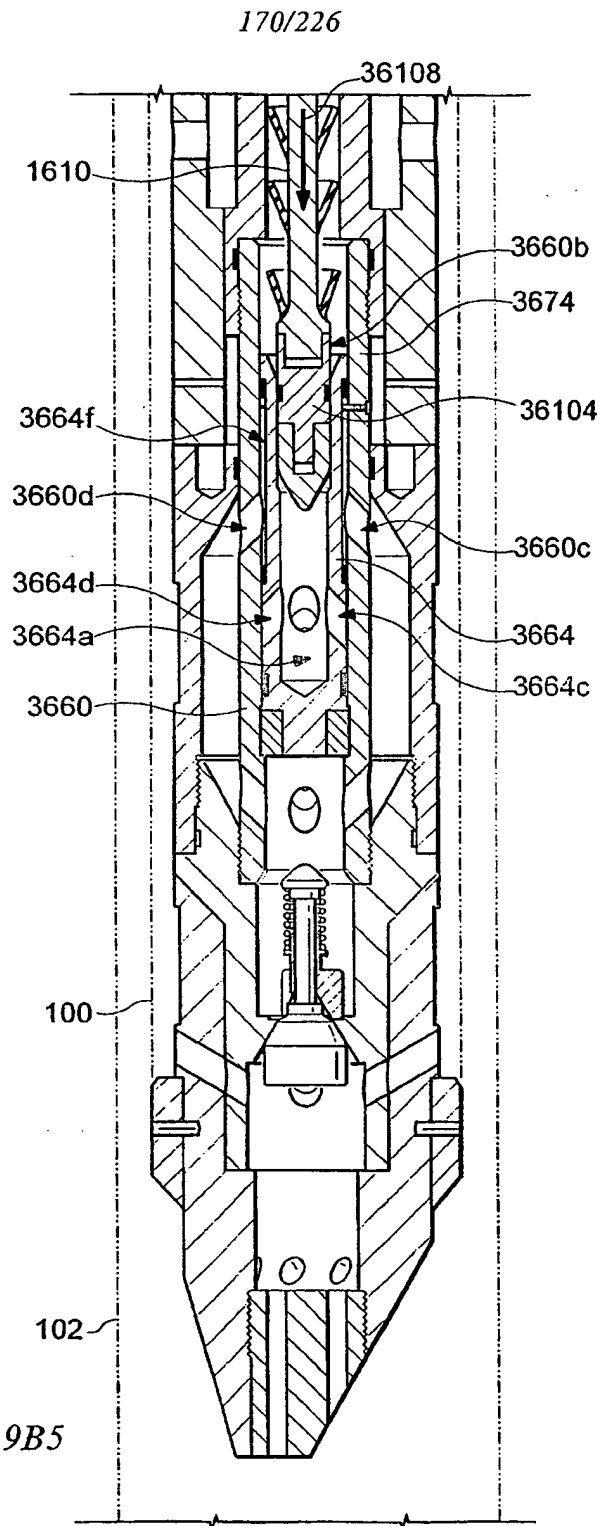


Fig. 19B3

*Fig. 19B4*





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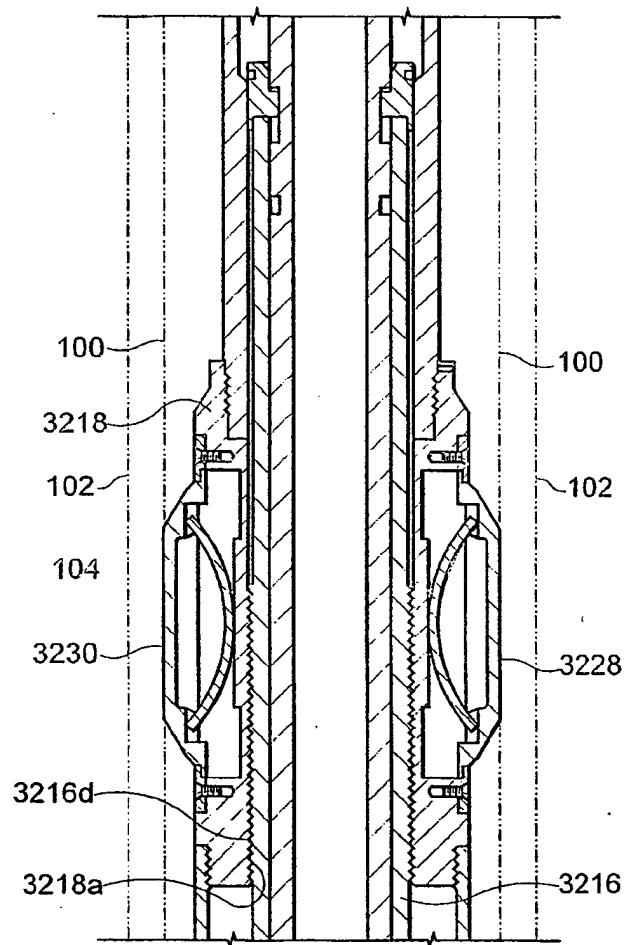


Fig. 19C2

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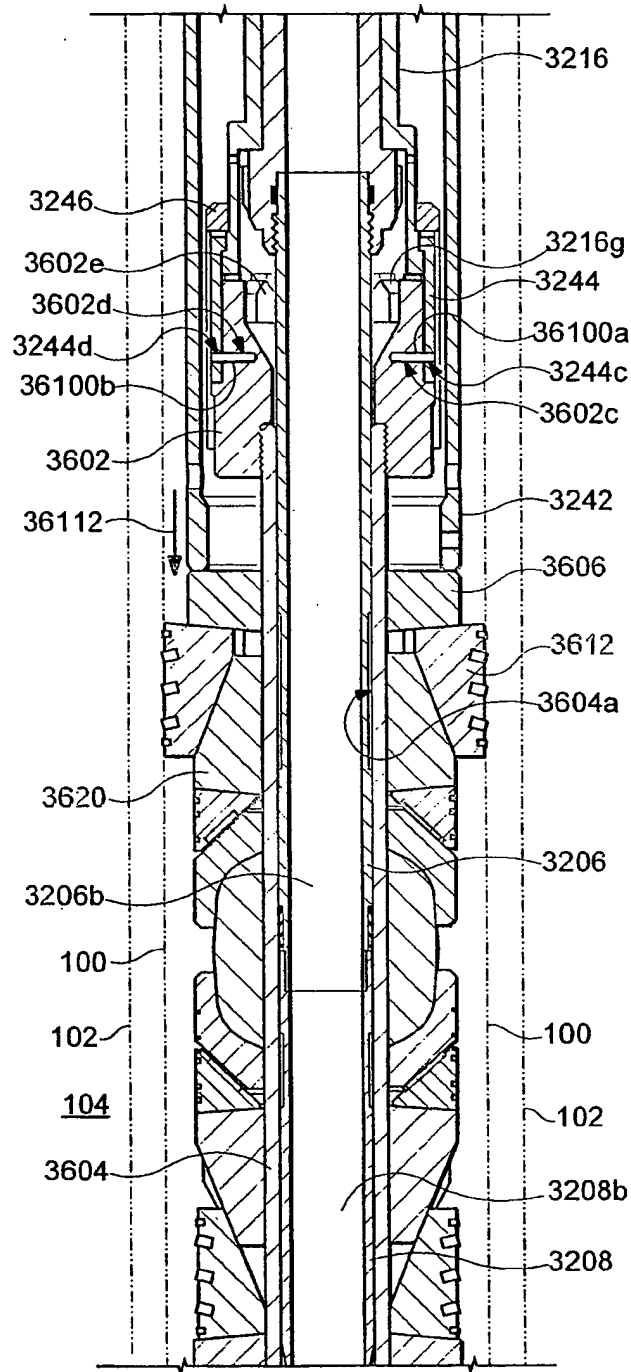


Fig. 19C3



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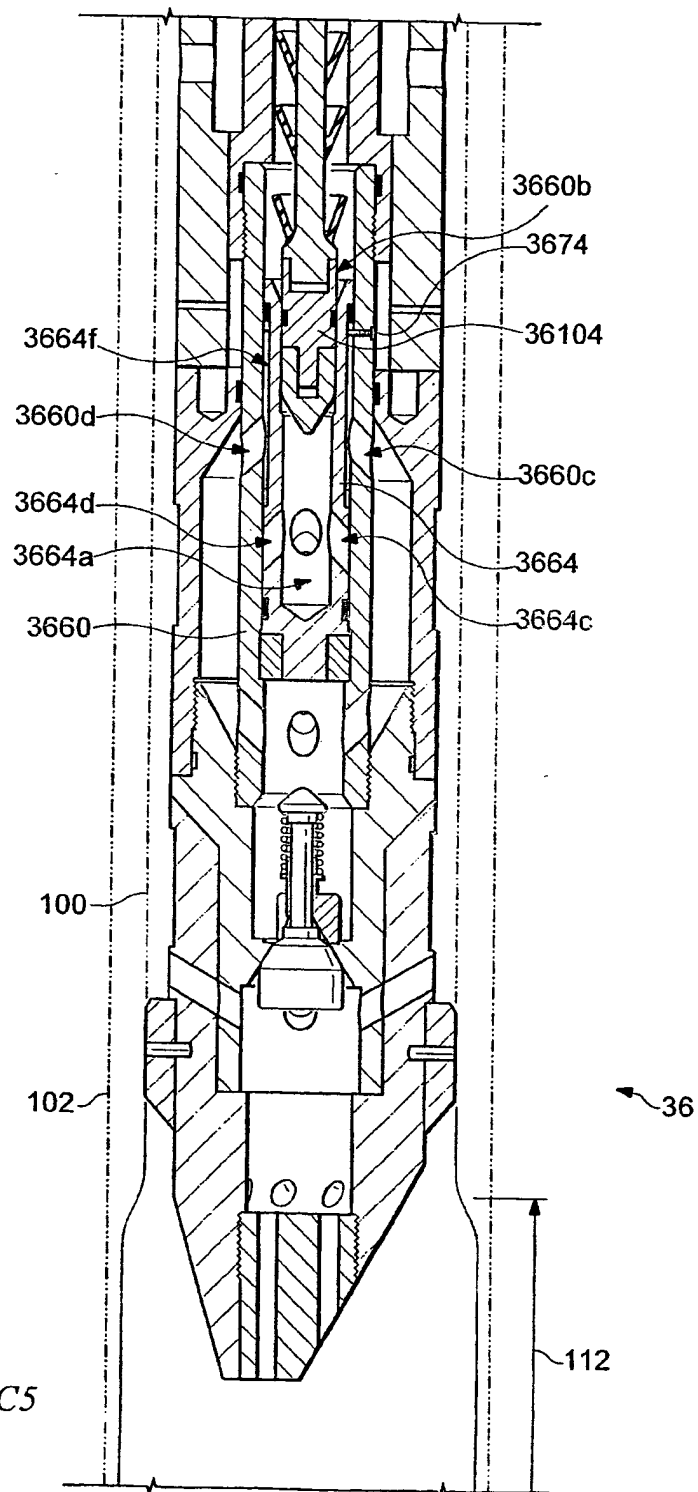


Fig. 19C5

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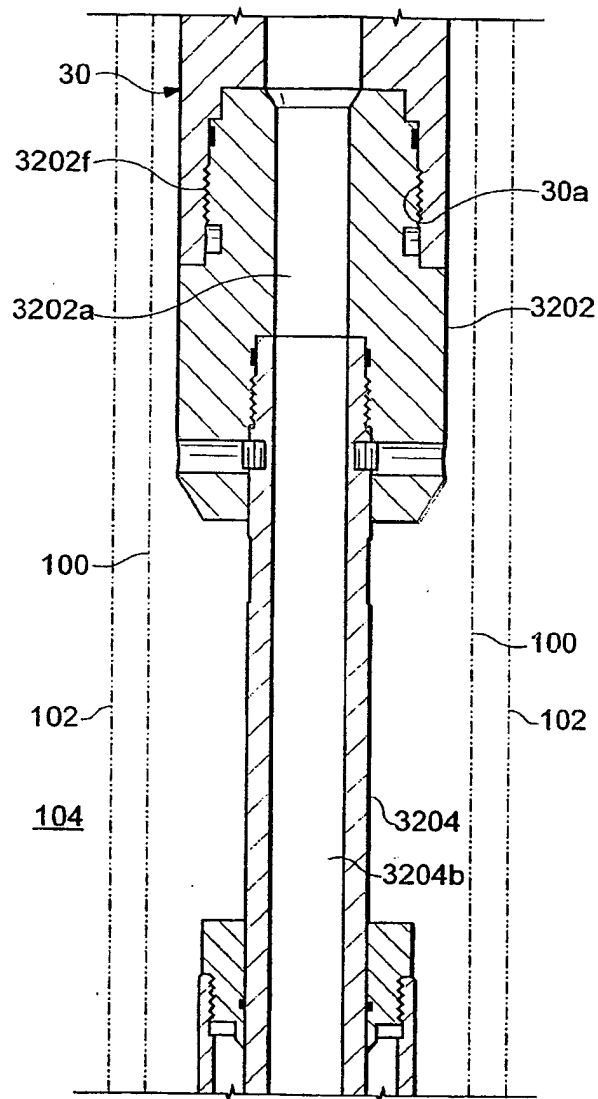


Fig. 19D1

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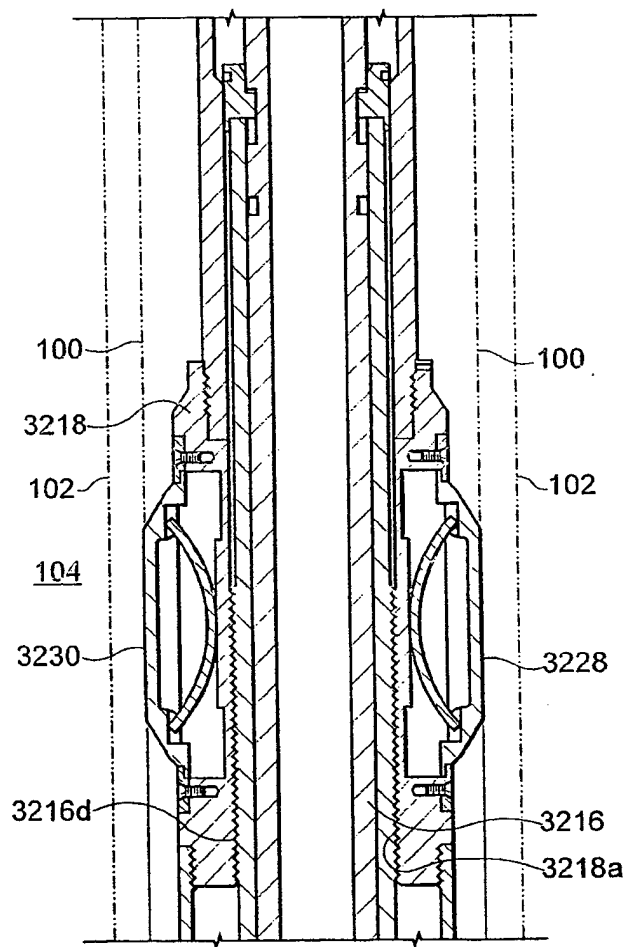


Fig. 19D2

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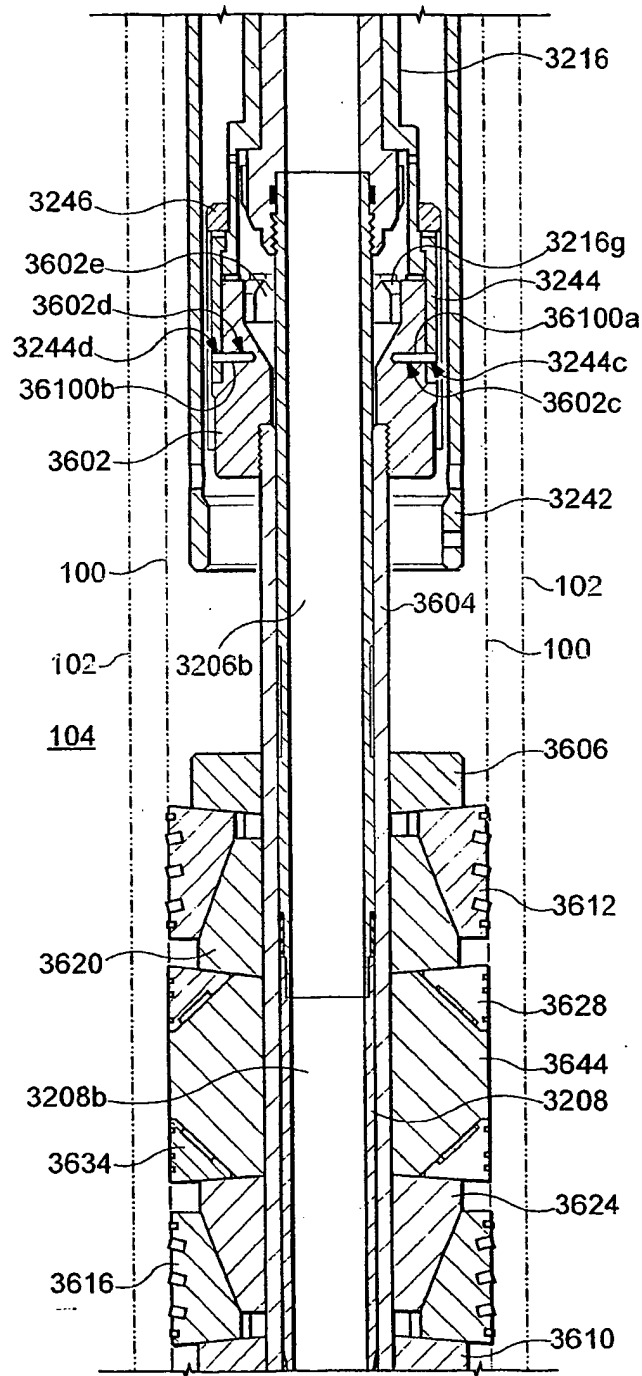
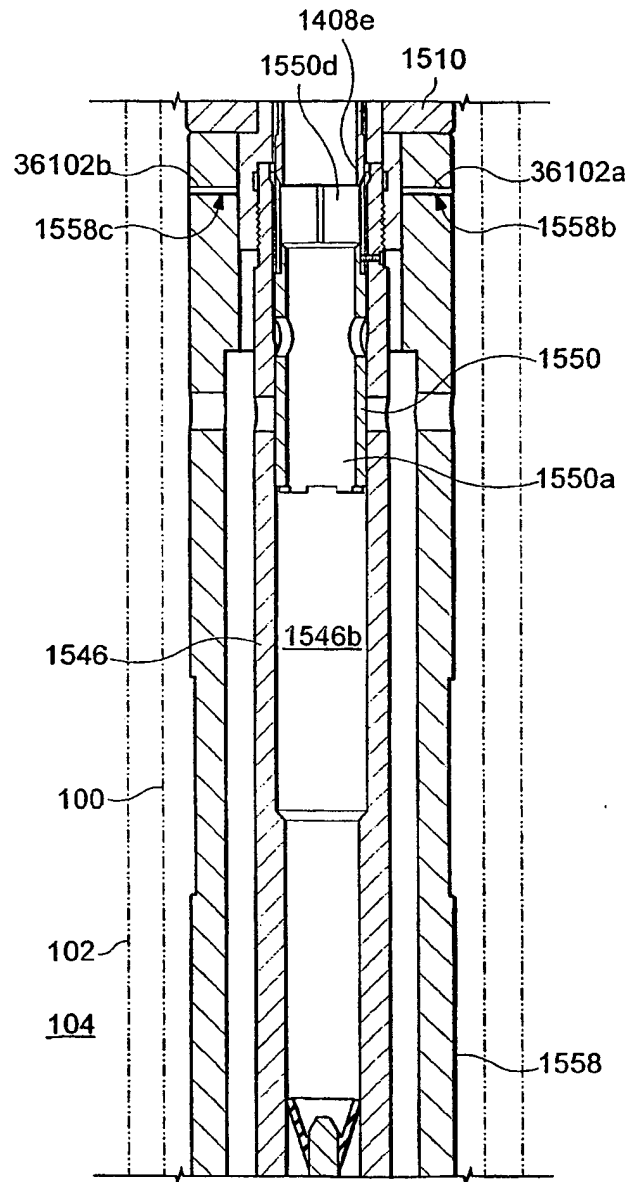


Fig. 19D3

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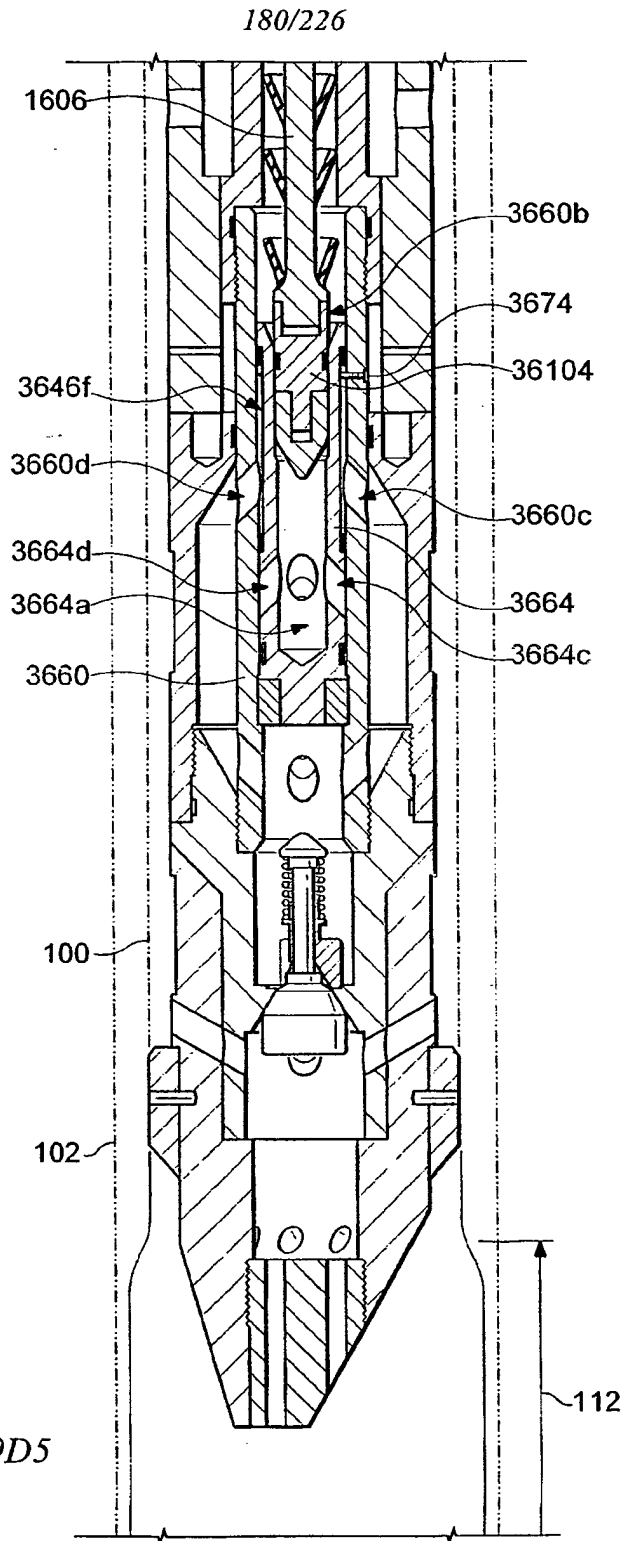


Fig. 19D5

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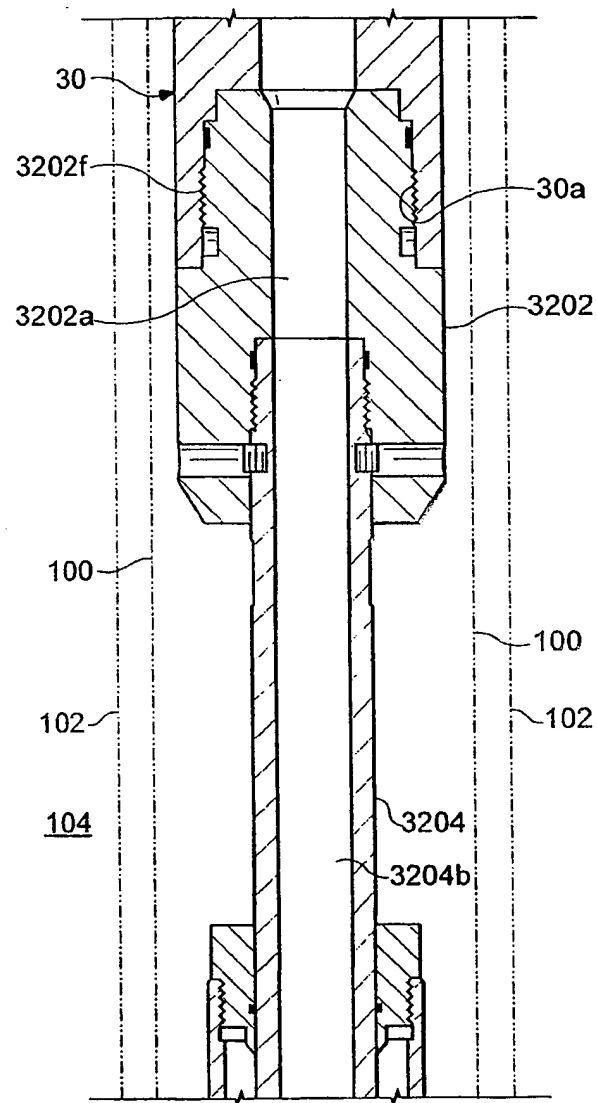


Fig. 19E1

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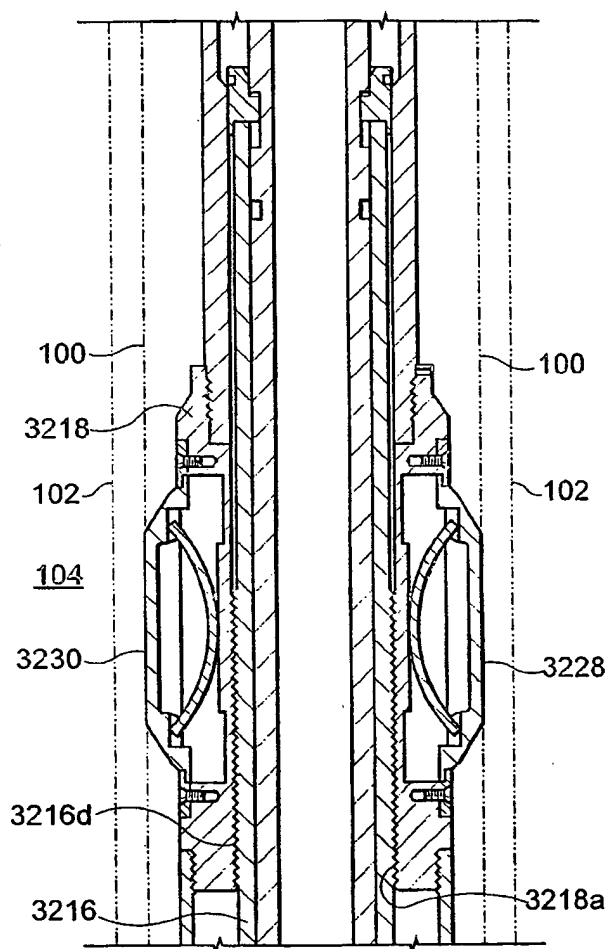


Fig. 19E2

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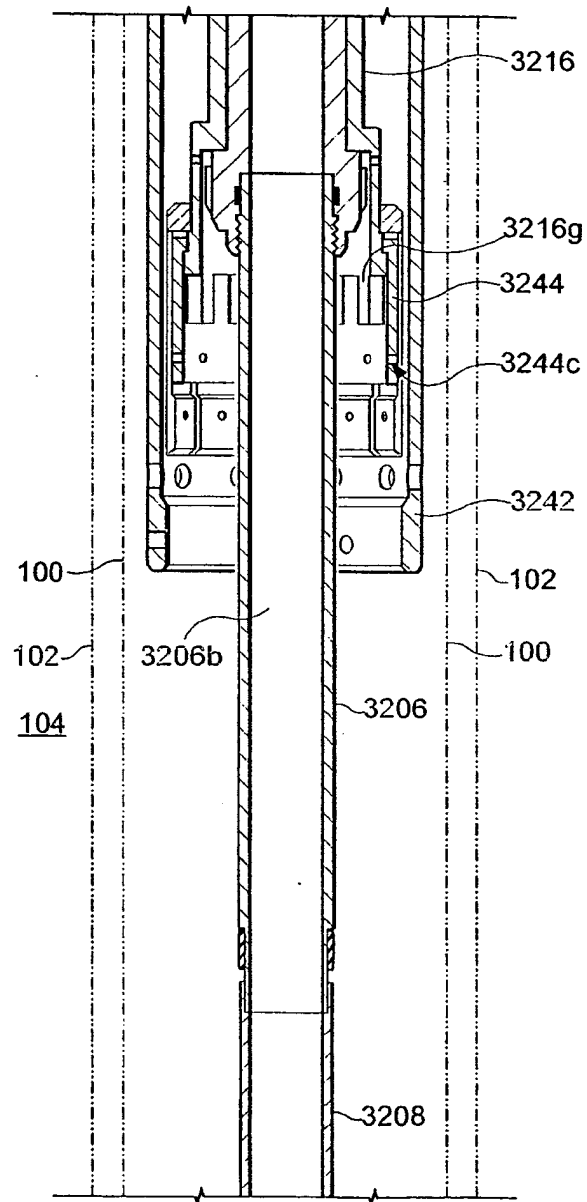


Fig. 19E3

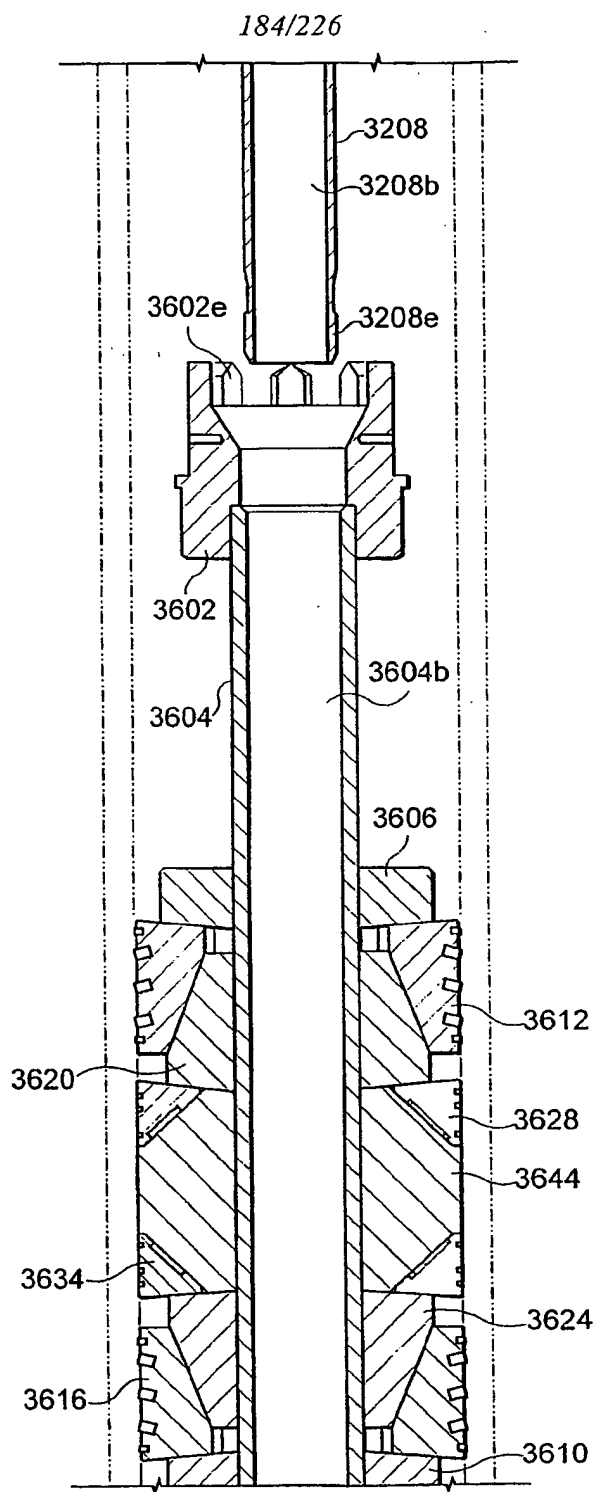


Fig. 19E4

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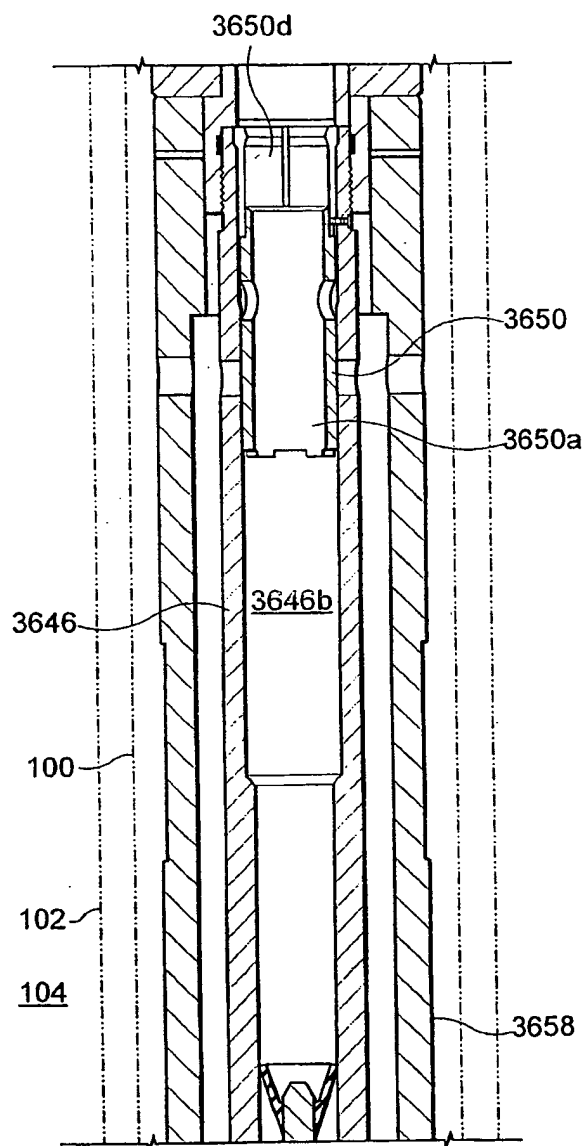


Fig. 19E5

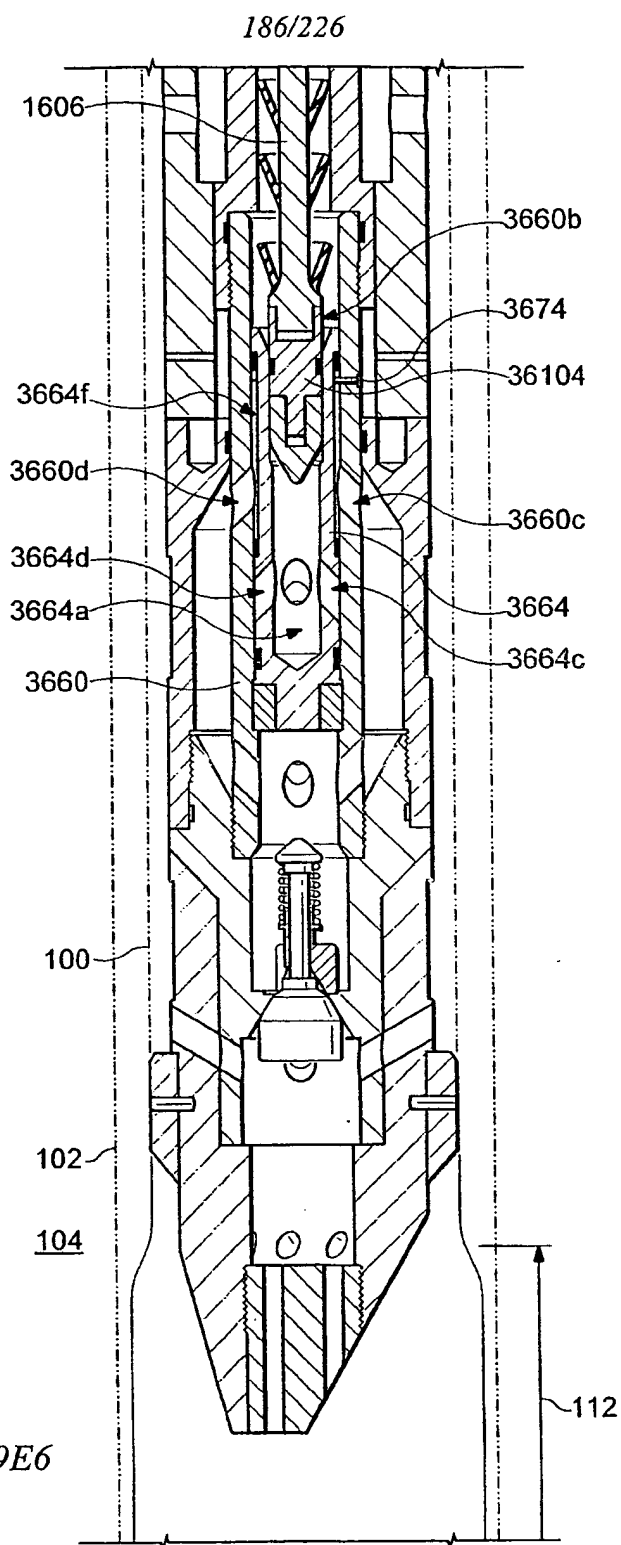


Fig. 19E6

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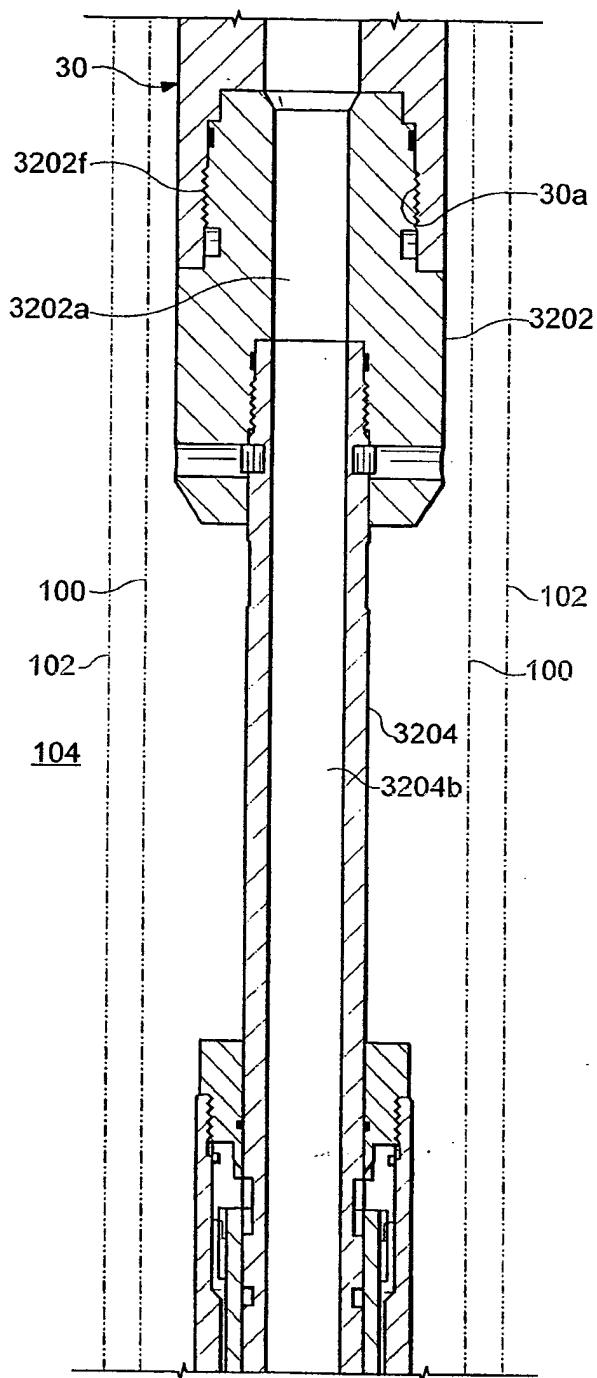


Fig. 19F1

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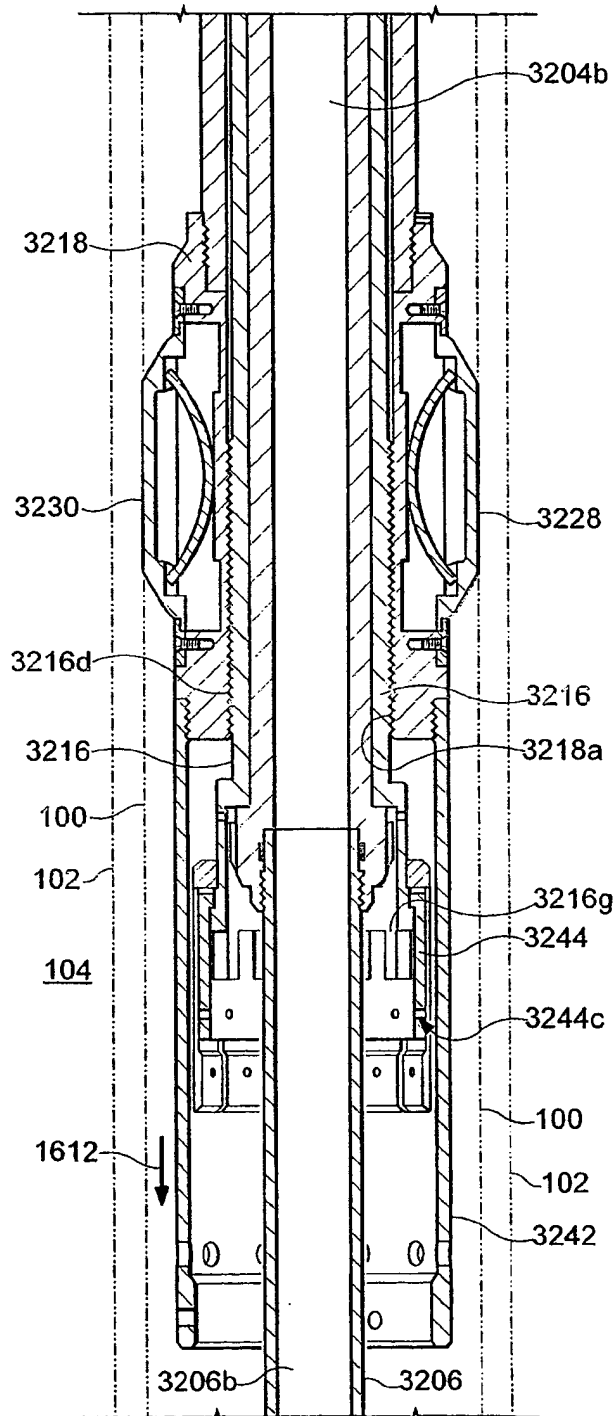


Fig. 19F2

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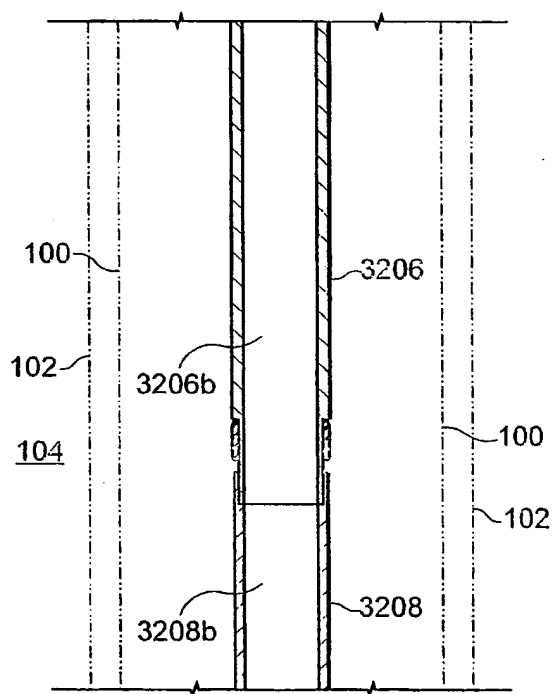


Fig. 19F3

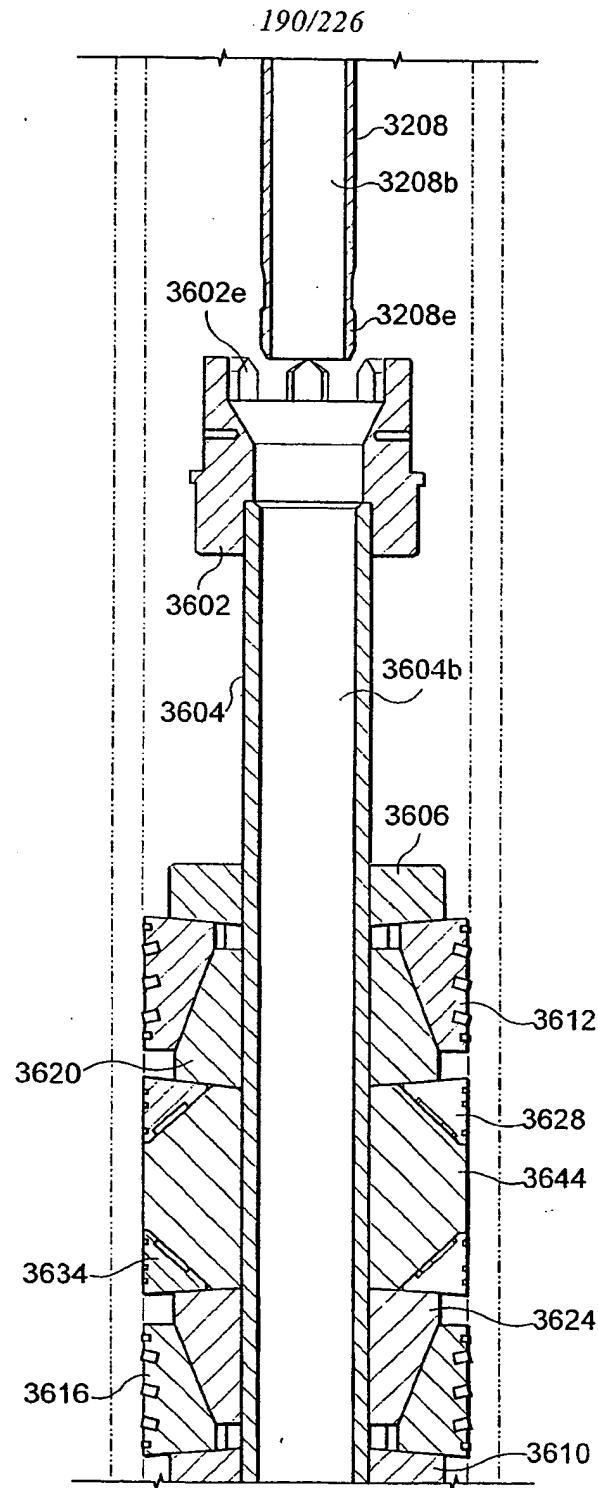


Fig. 19F4

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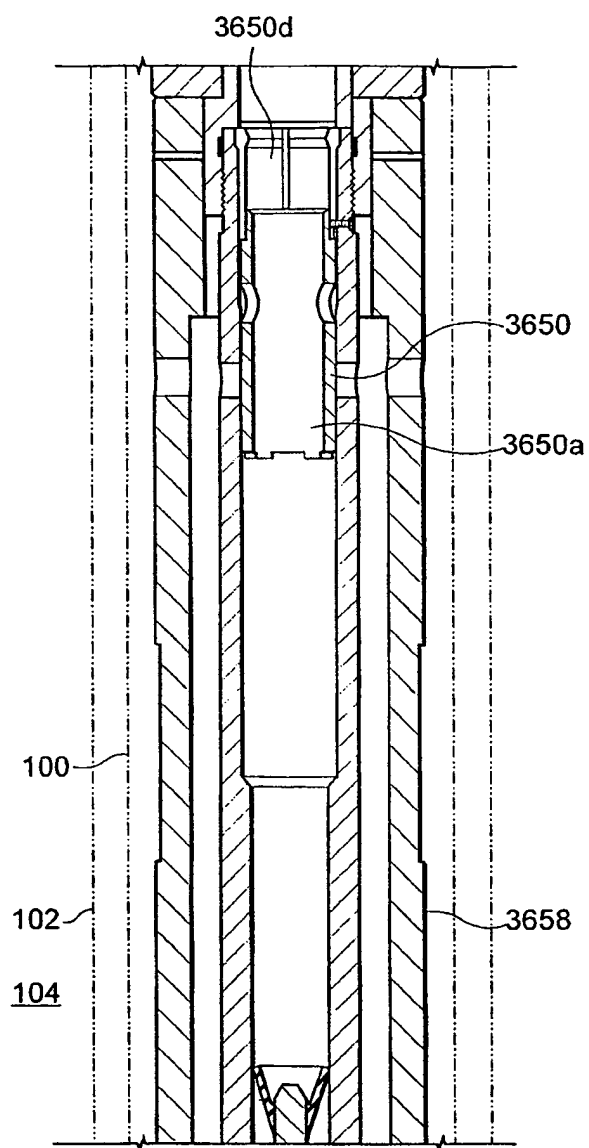


Fig. 19F5

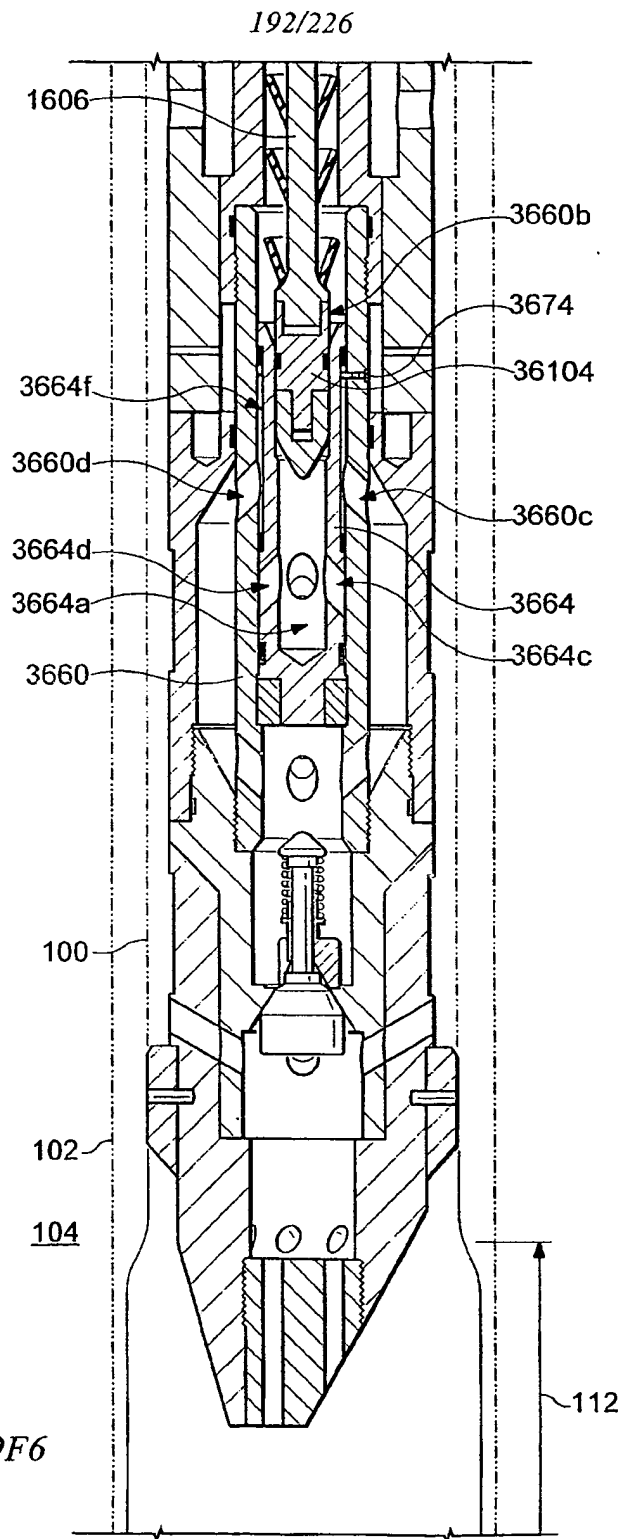


Fig. 19F6

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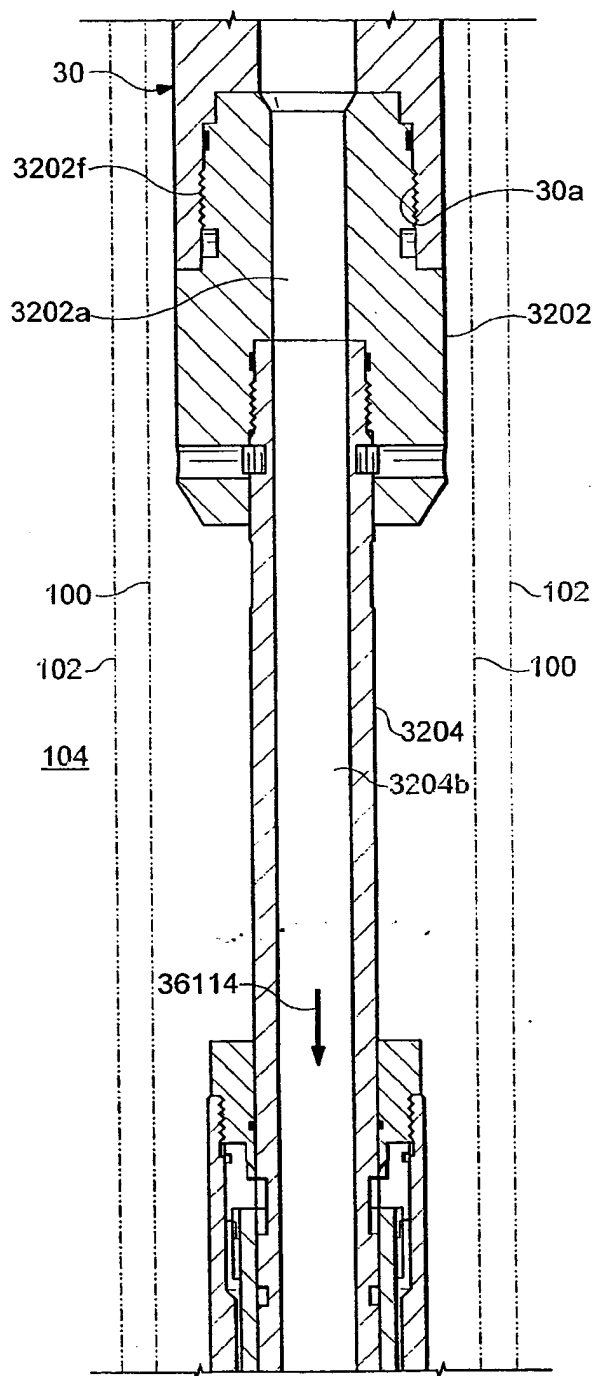


Fig. 19G1

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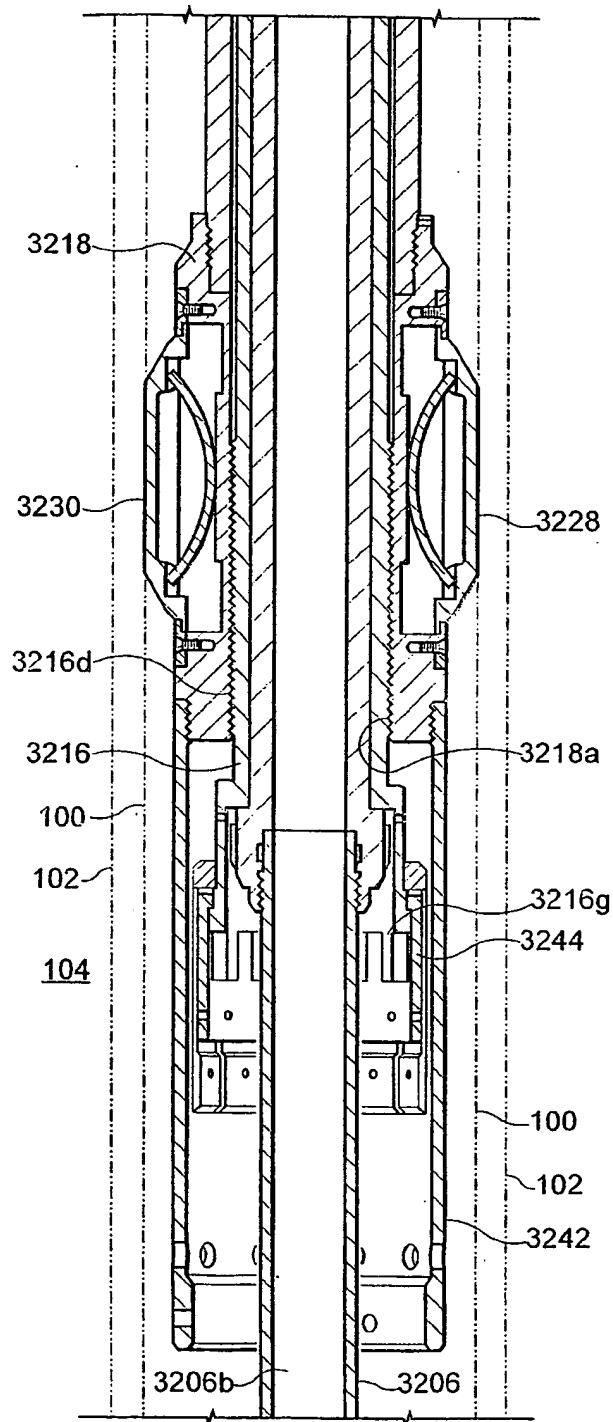


Fig. 19G2

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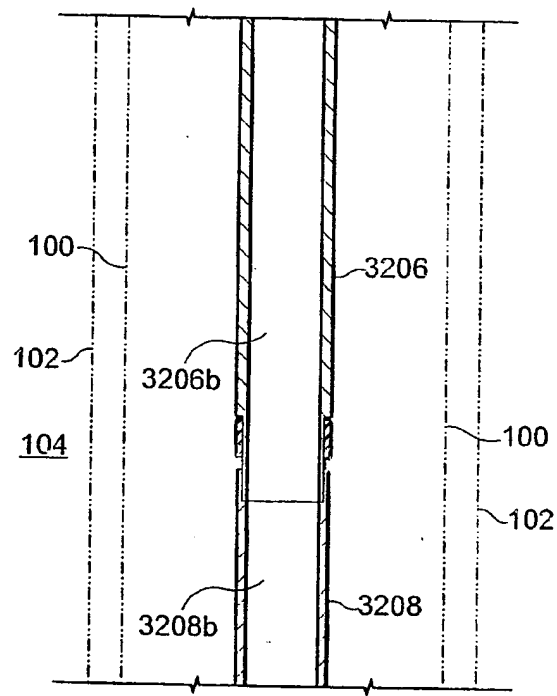


Fig. 19G3

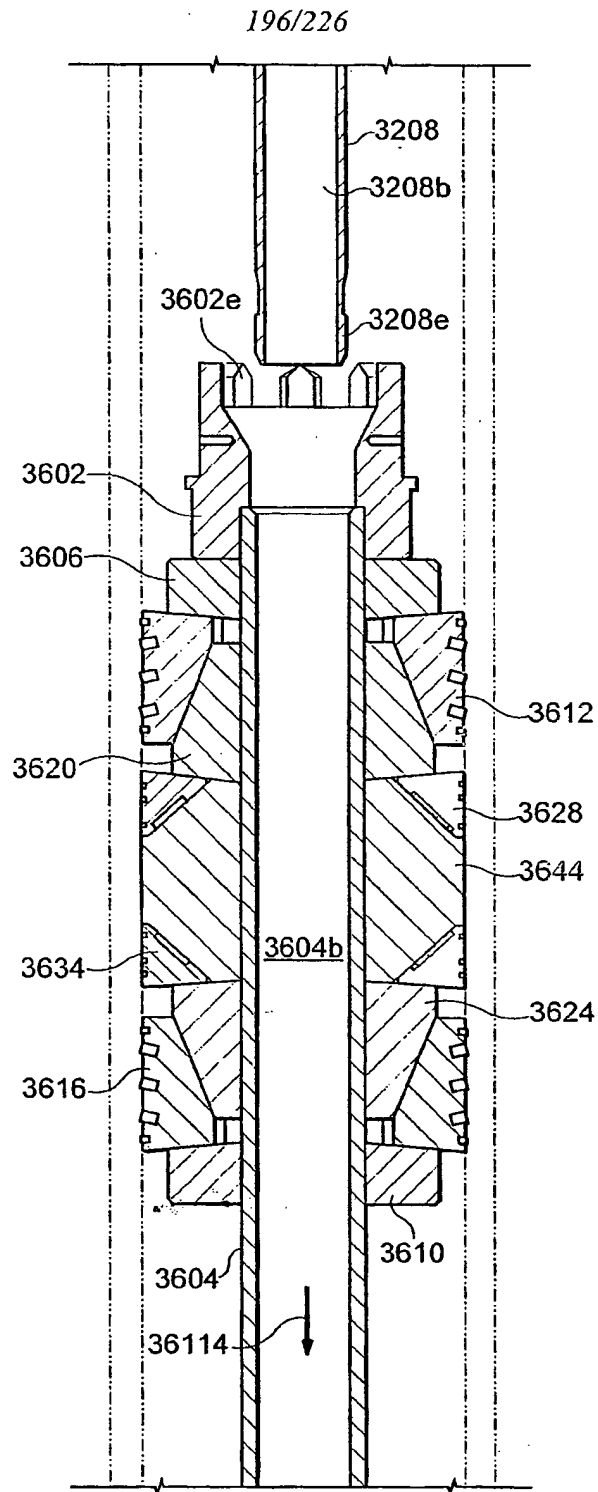


Fig. 19G4

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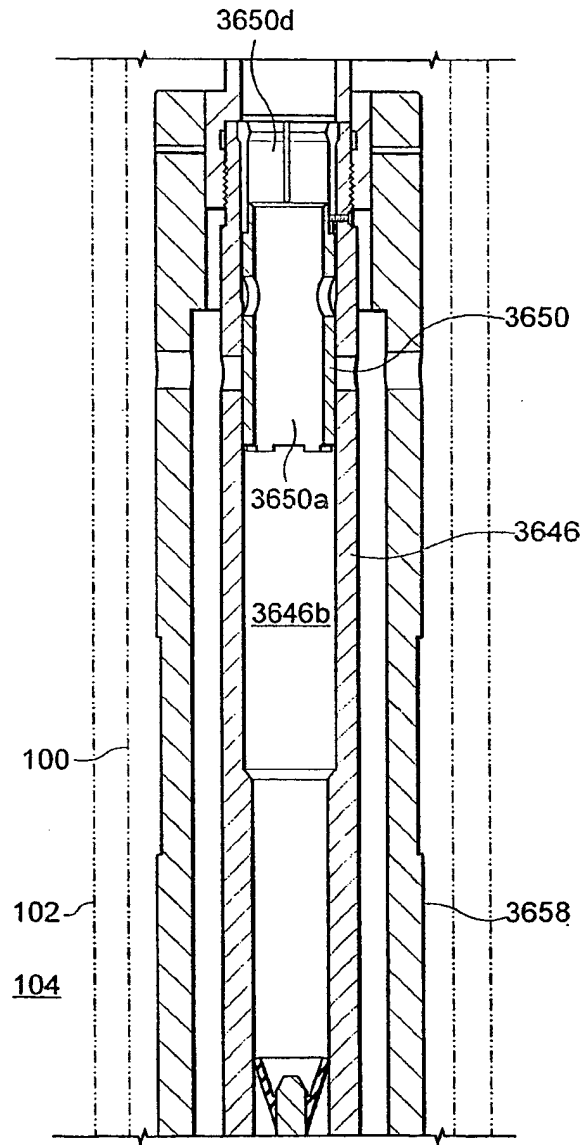


Fig. 19G5

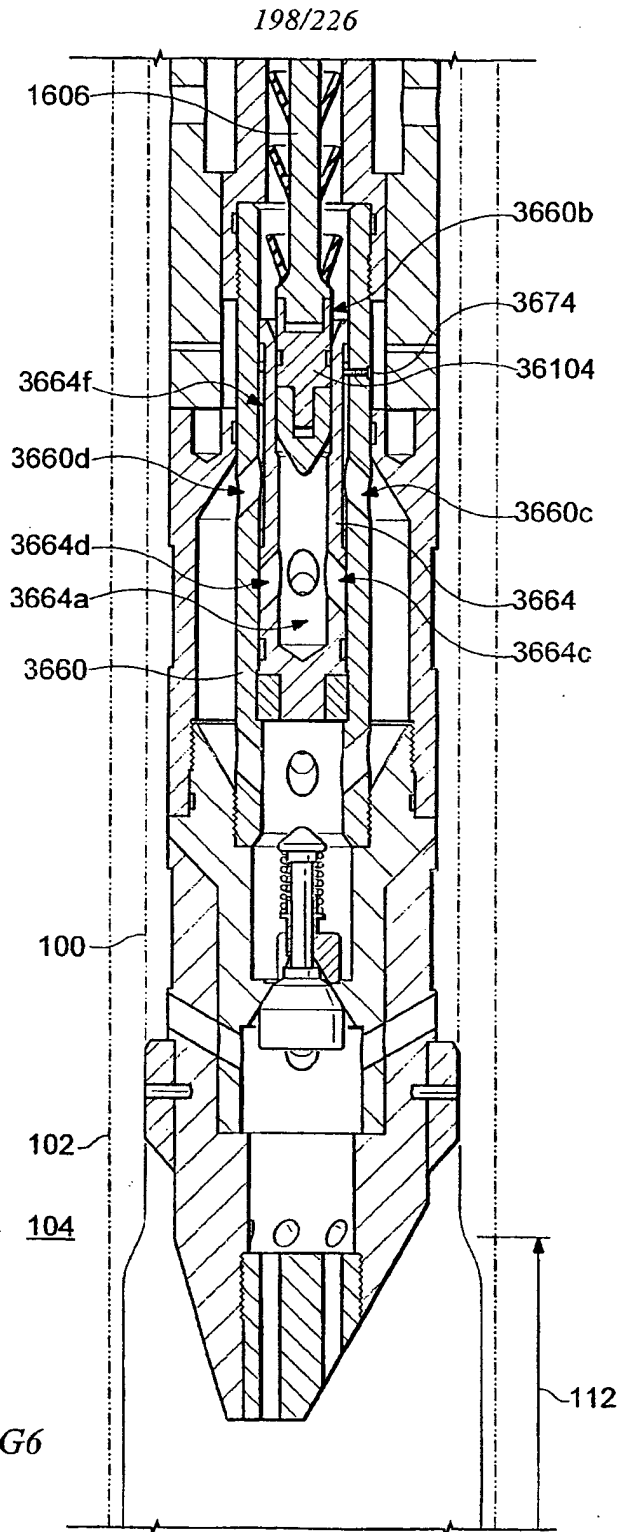


Fig. 19G6

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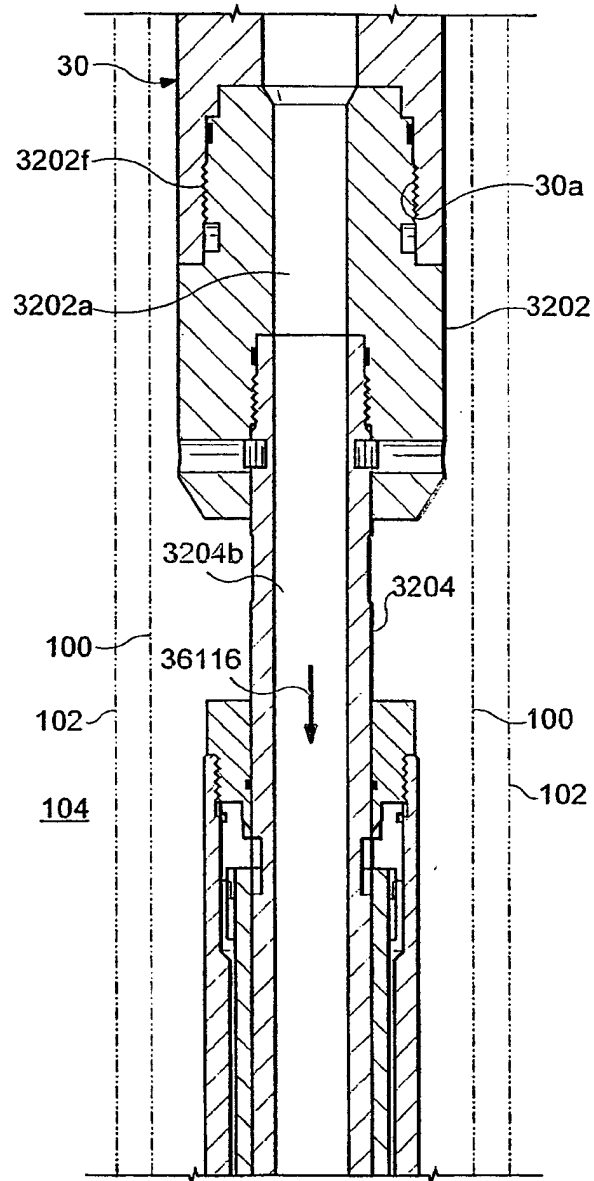


Fig. 19H1

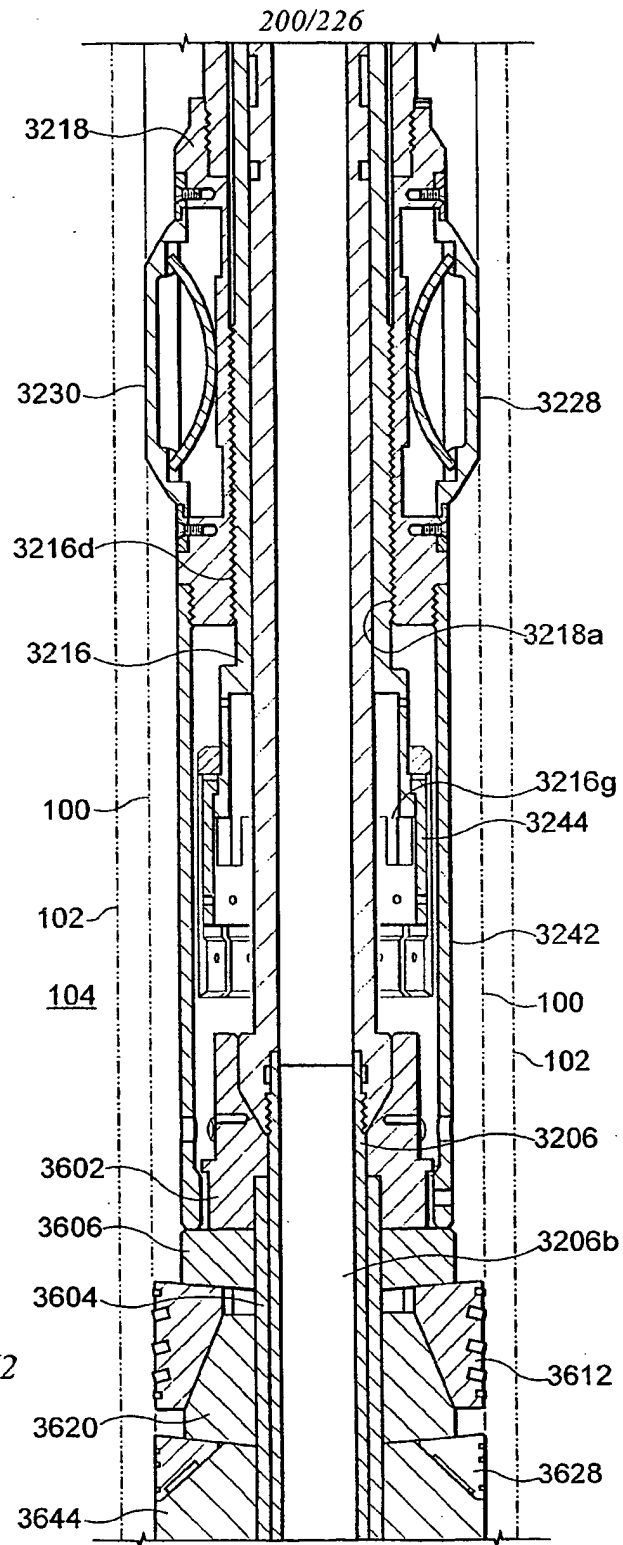


Fig. 19H2

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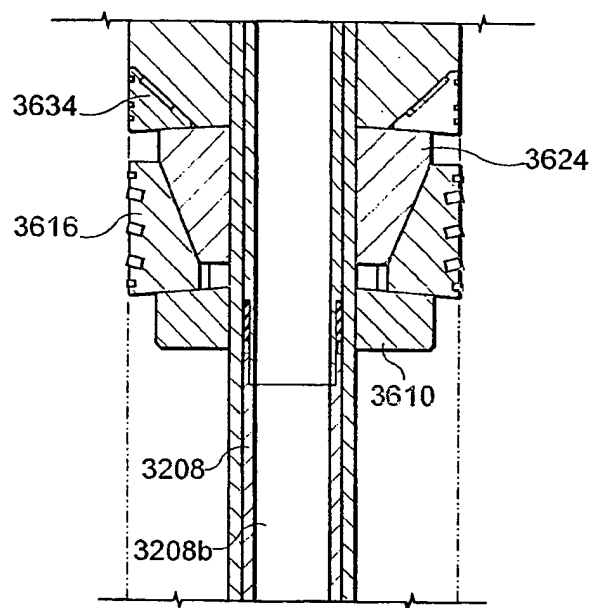


Fig. 19H3

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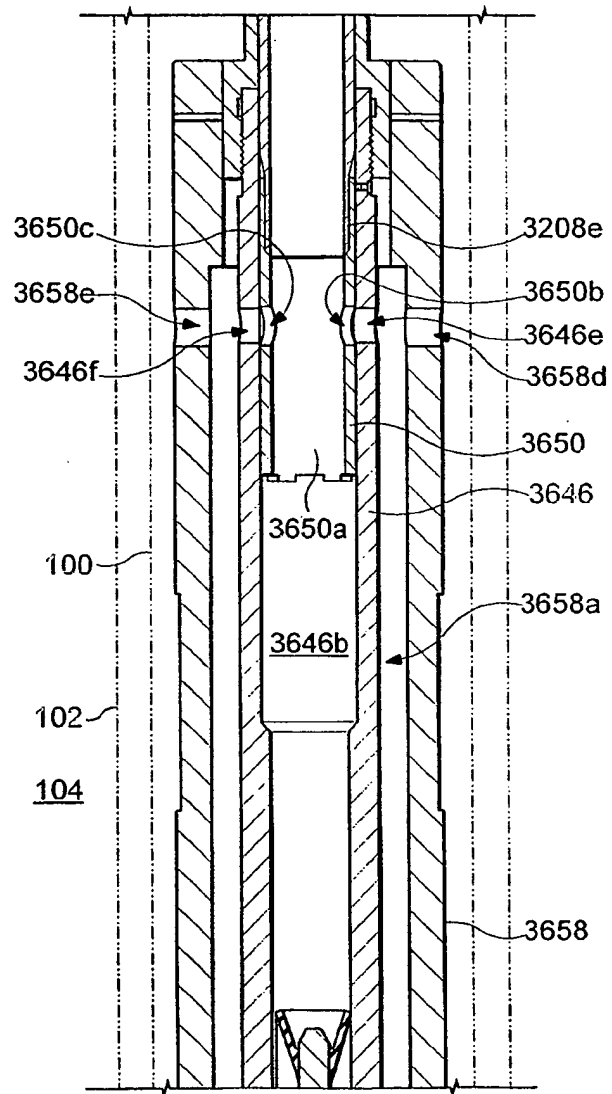


Fig. 19H4

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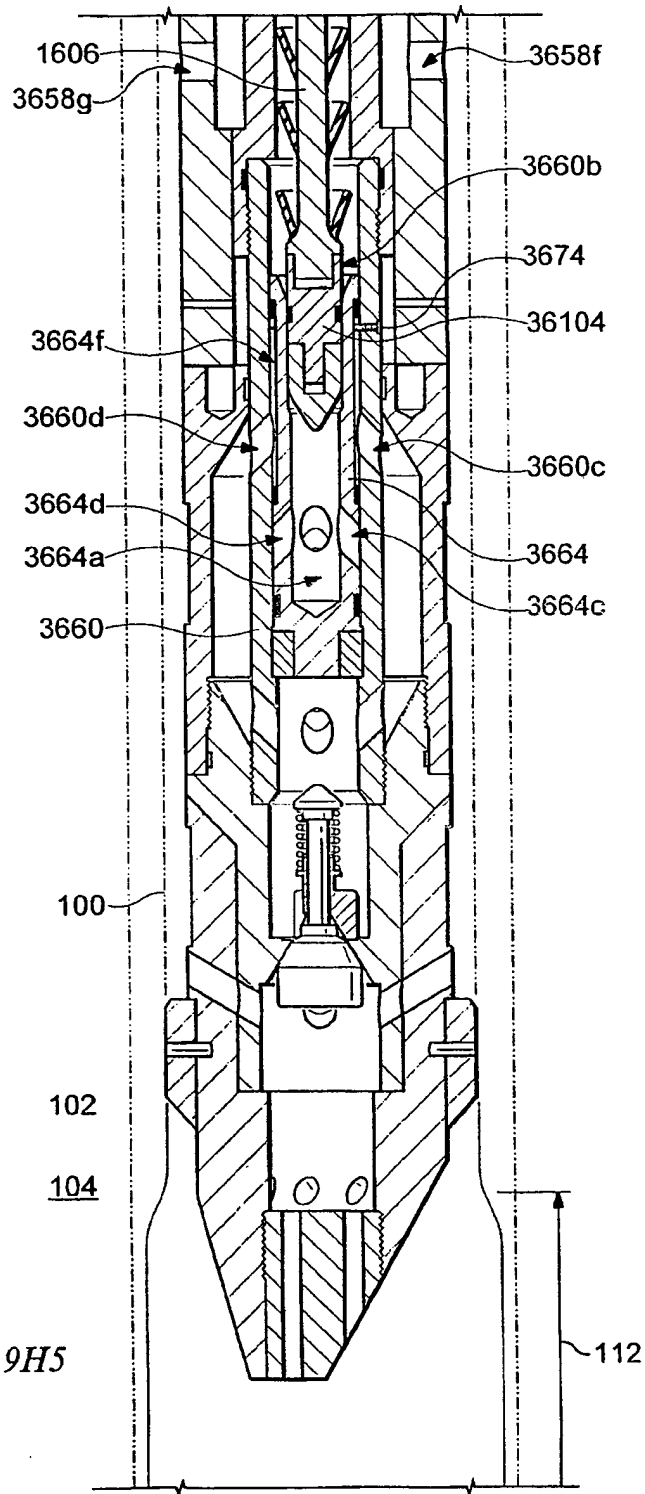


Fig. 19H5

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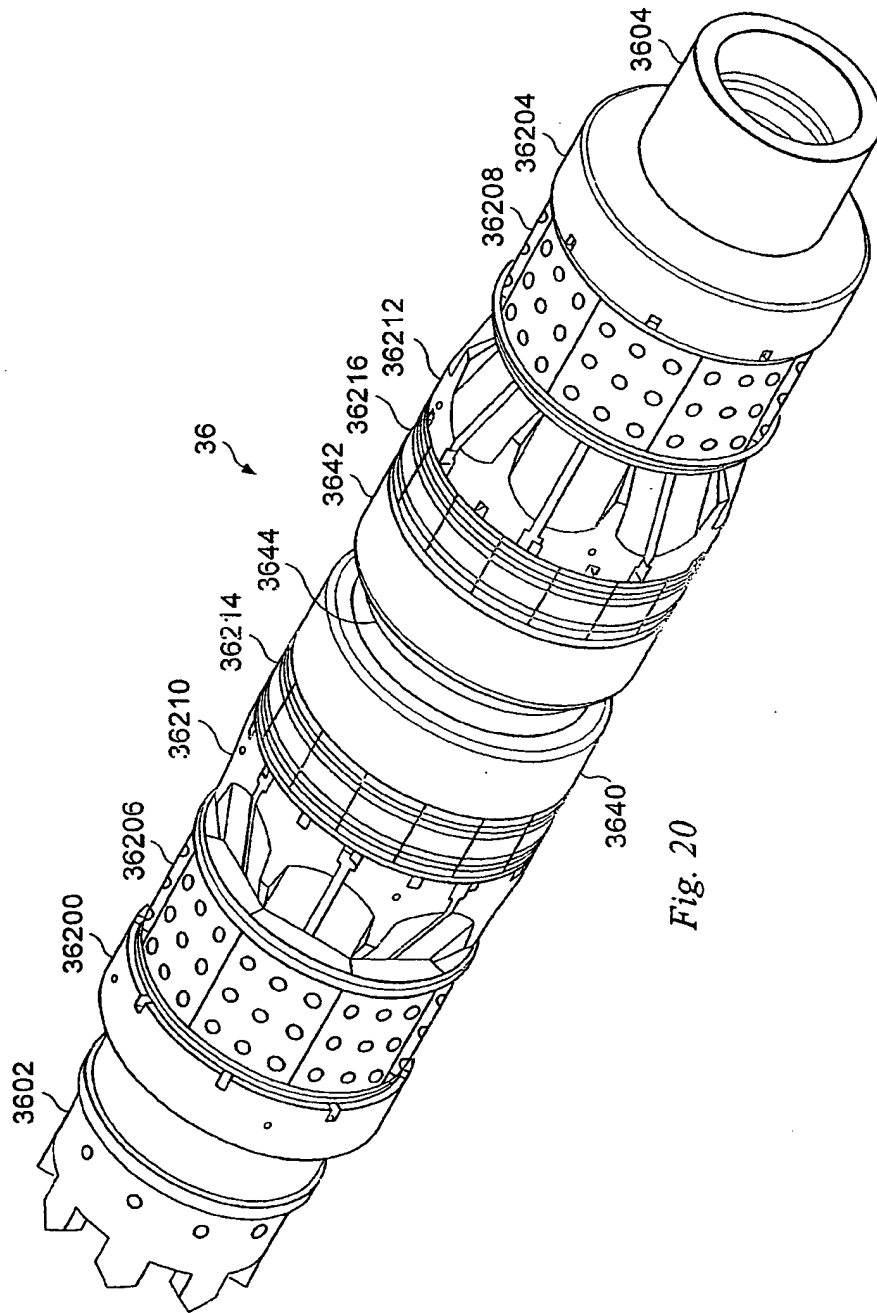
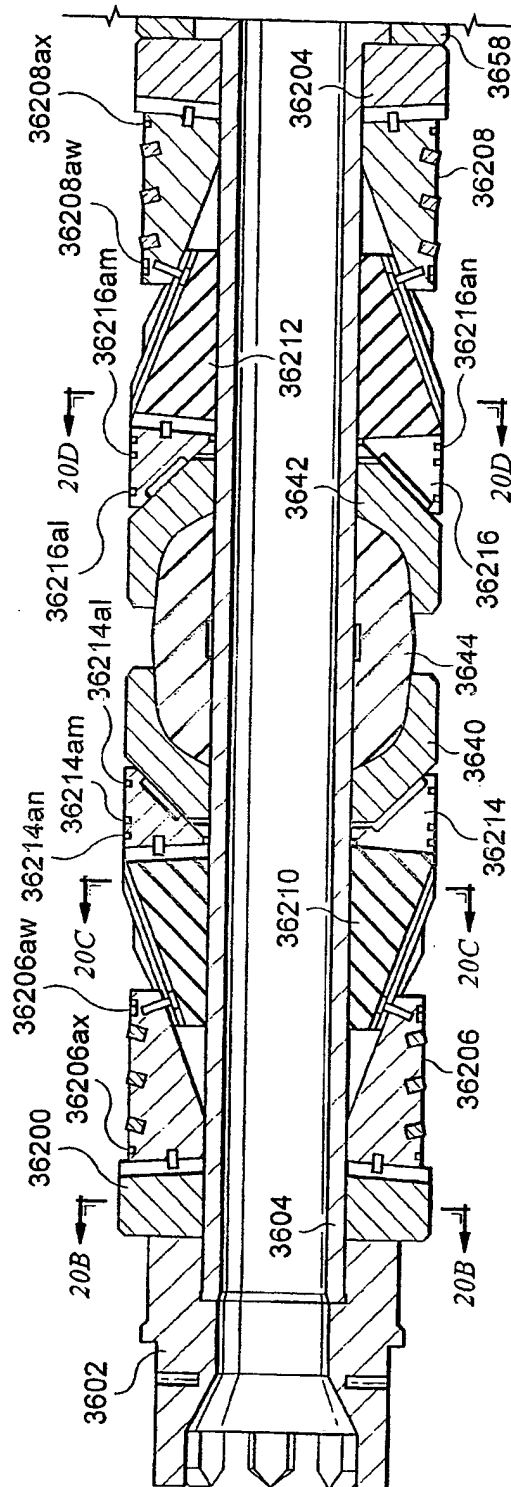


Fig. 20

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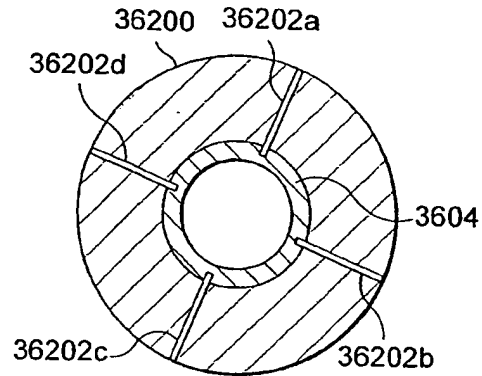


Fig. 20B

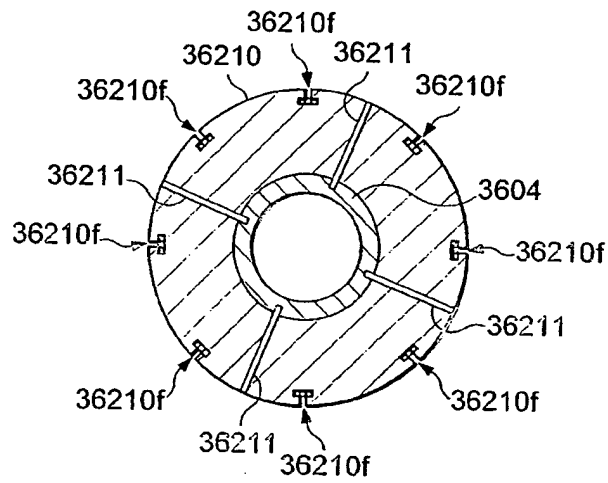


Fig. 20C

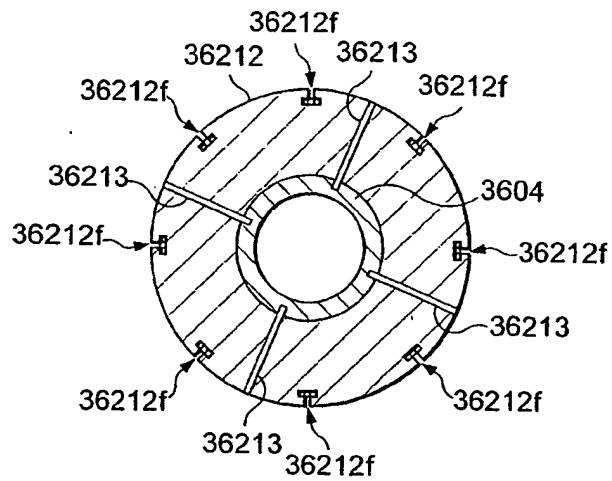


Fig. 20D

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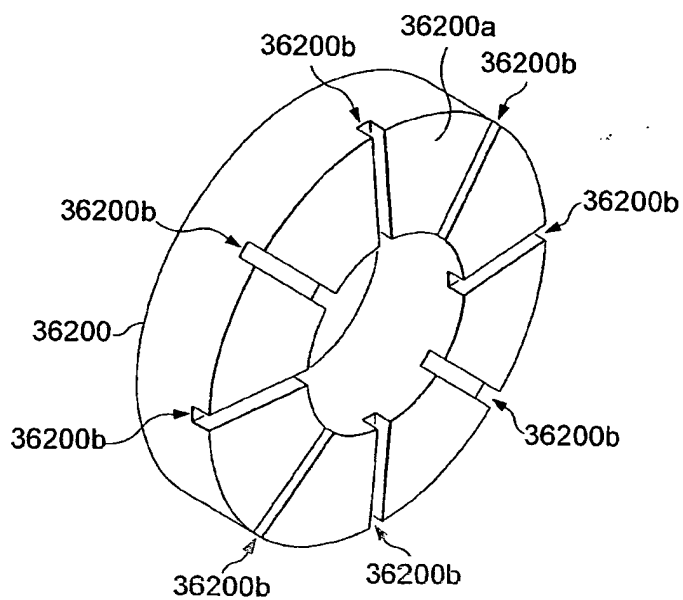


Fig. 20E

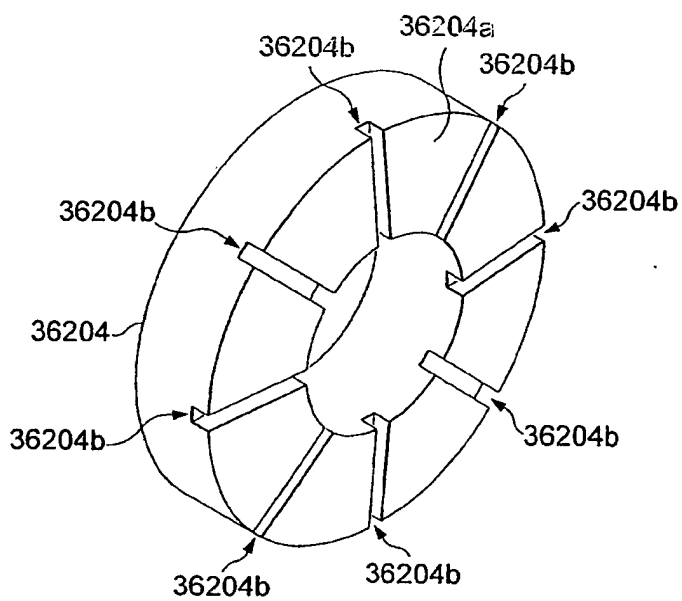


Fig. 20H

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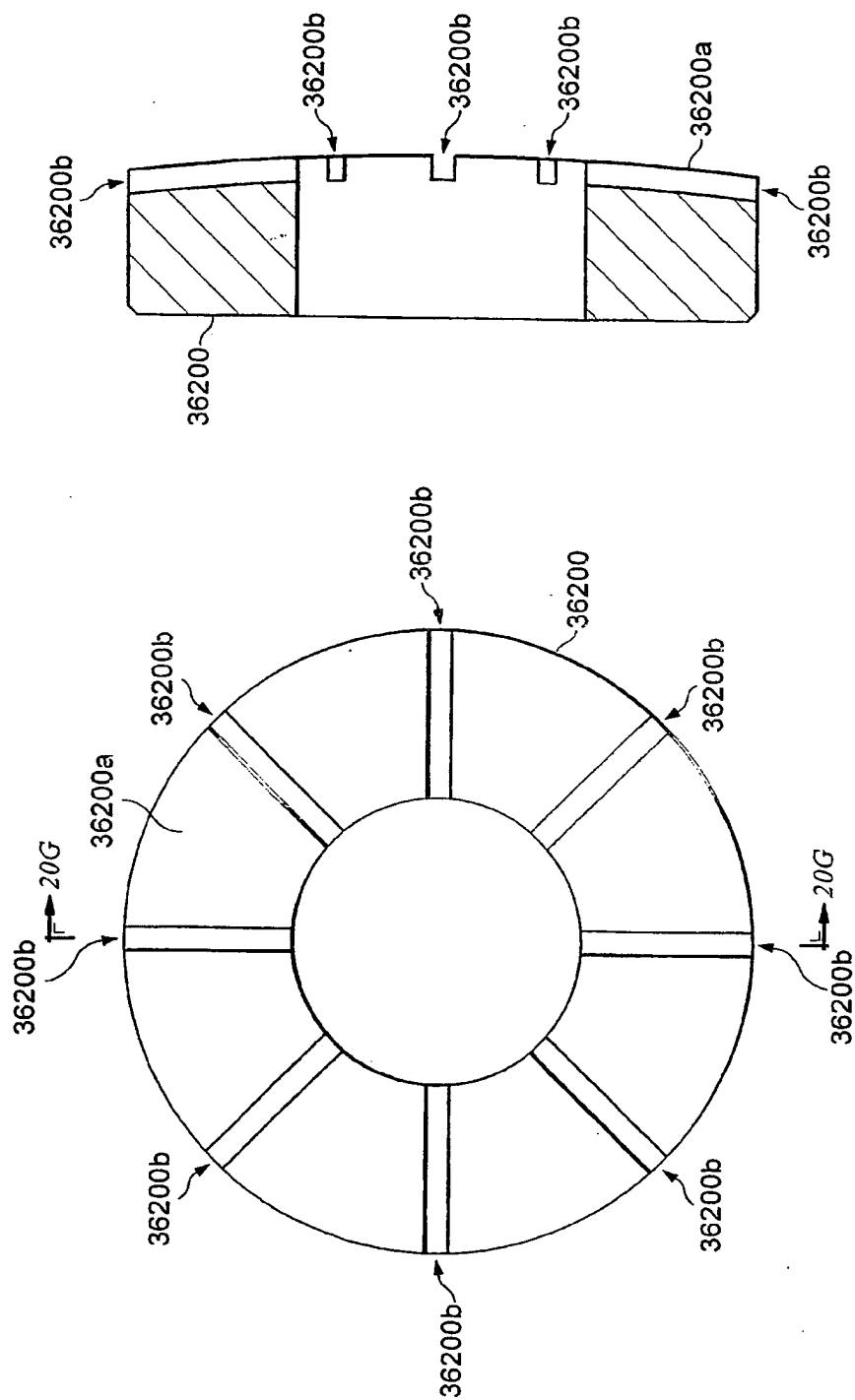


Fig. 20G

Fig. 20F

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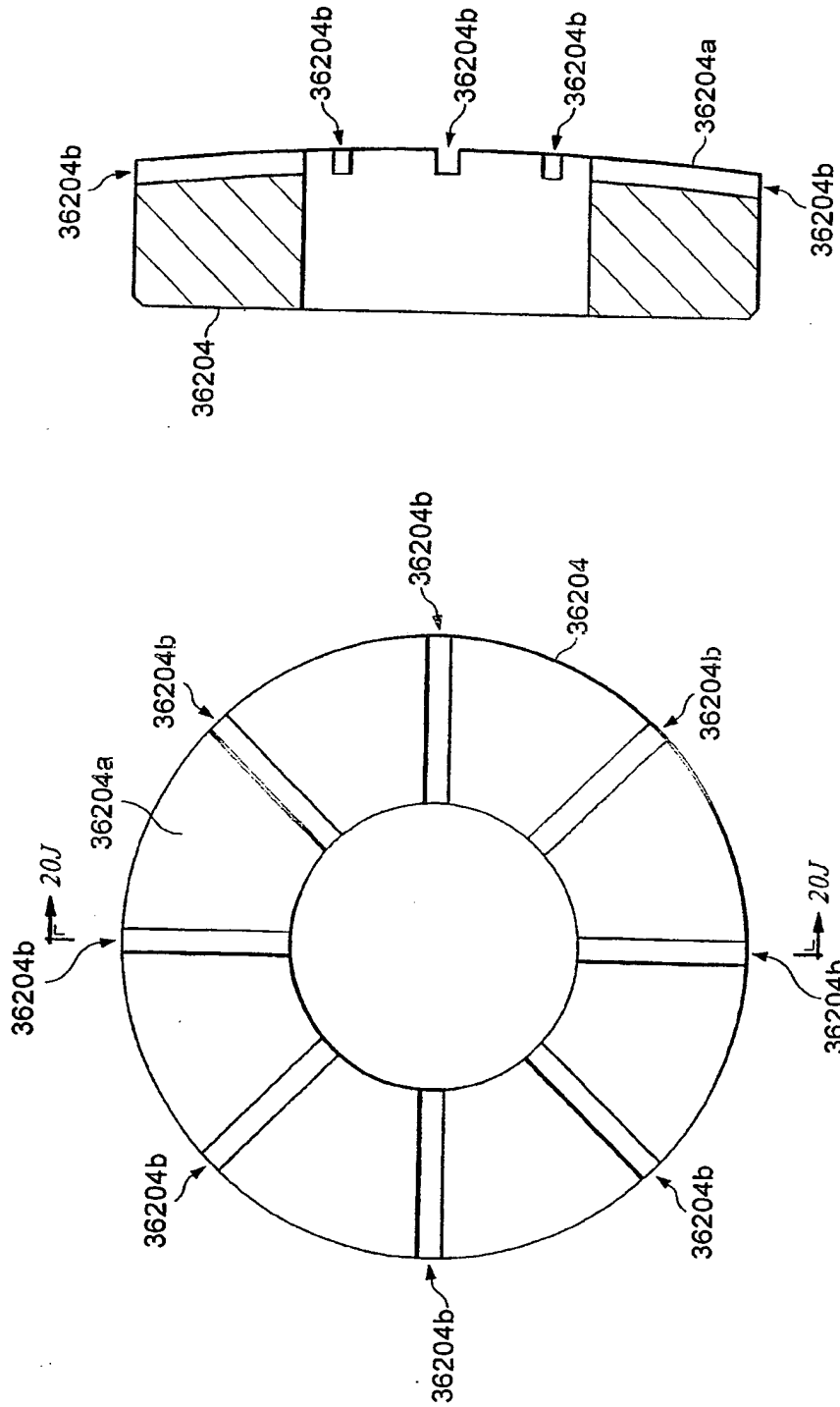
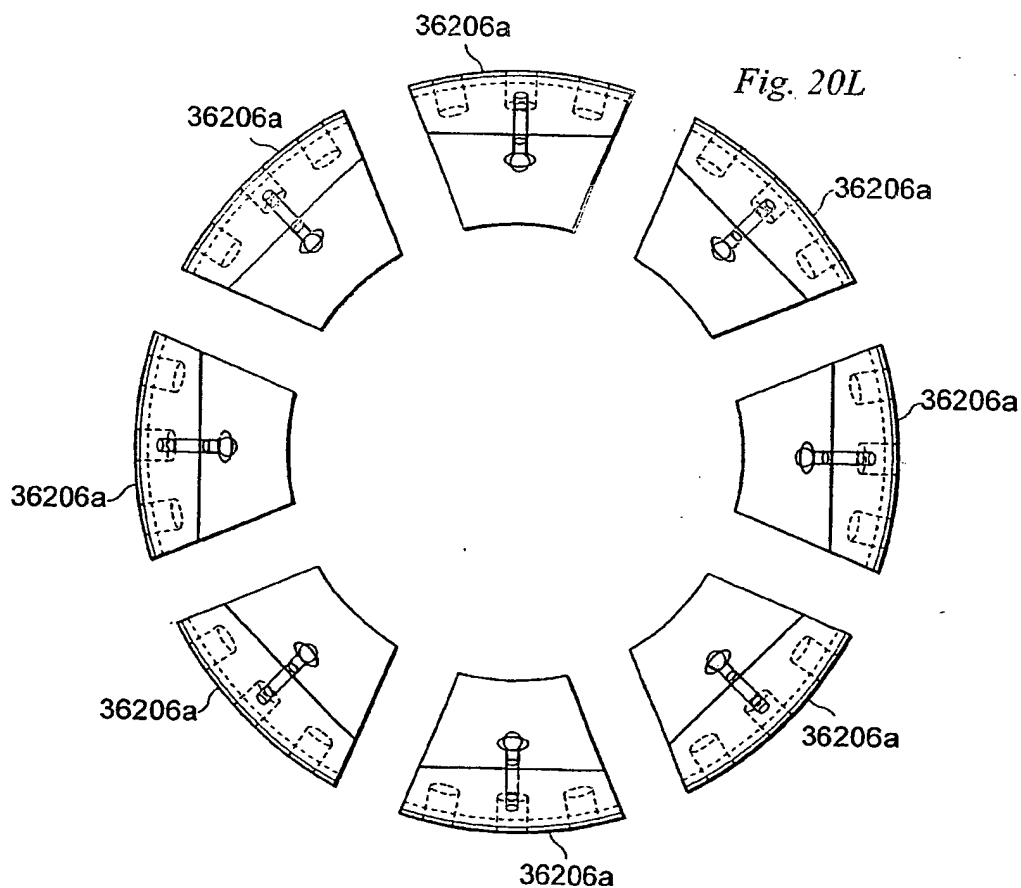
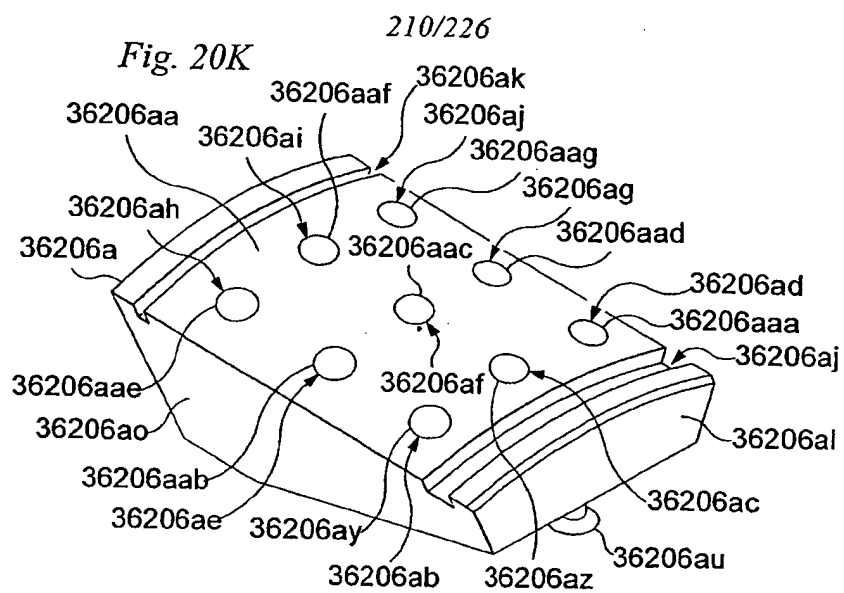
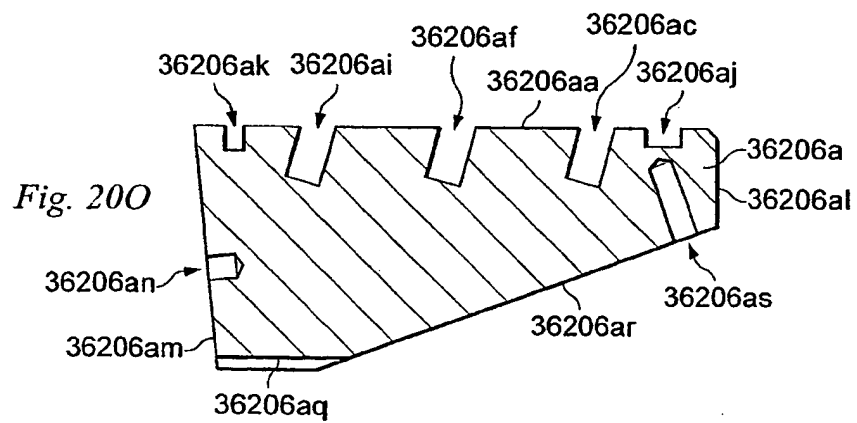
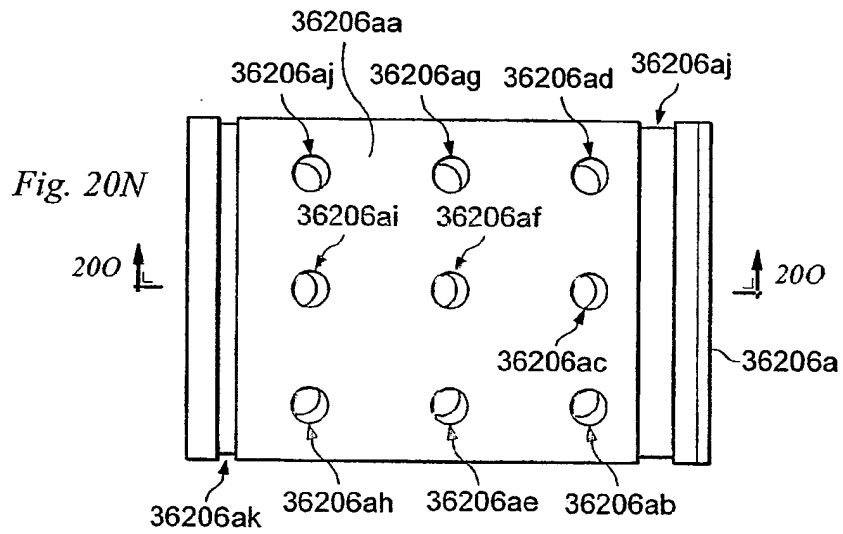
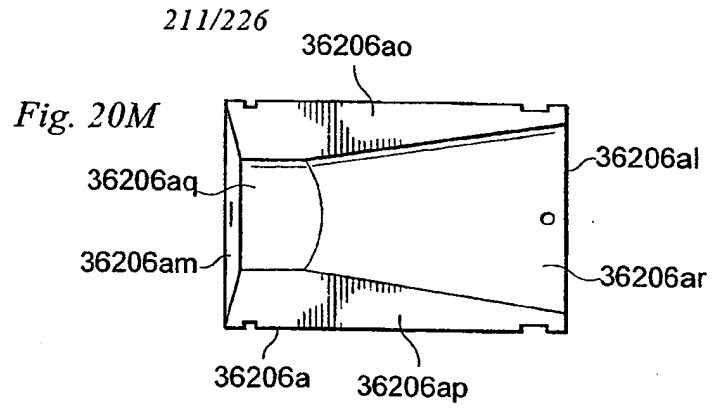


Fig. 20J

Fig. 20I





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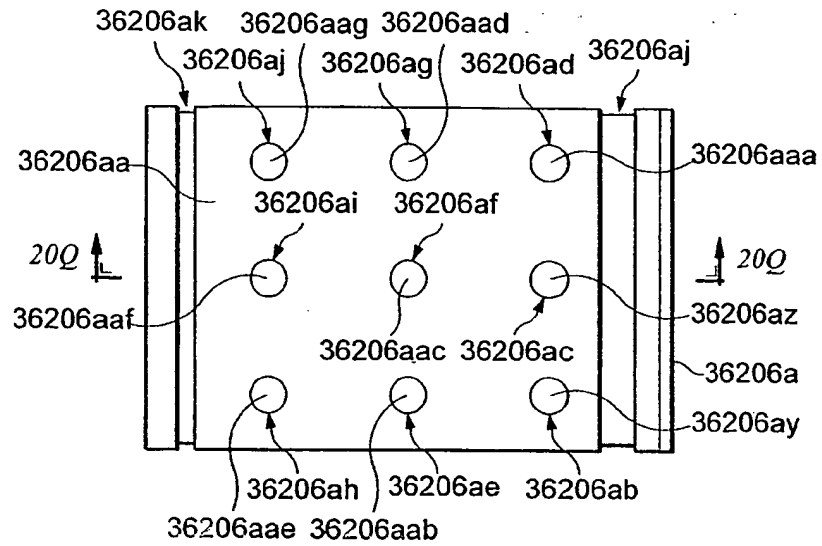


Fig. 20P

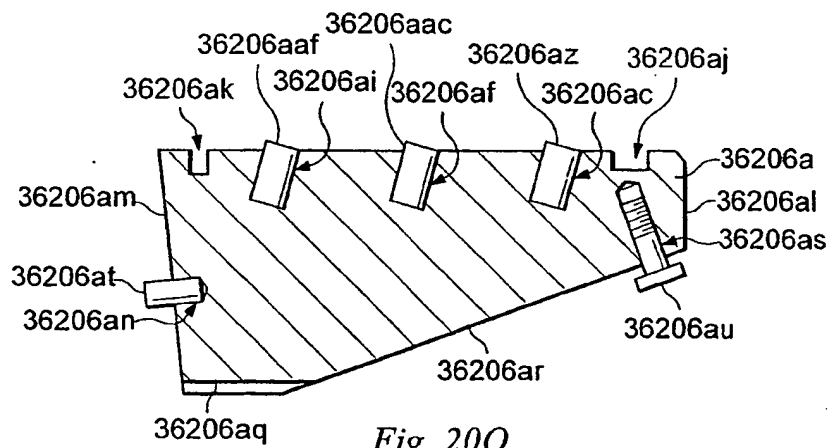


Fig. 20Q

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Fig. 20R

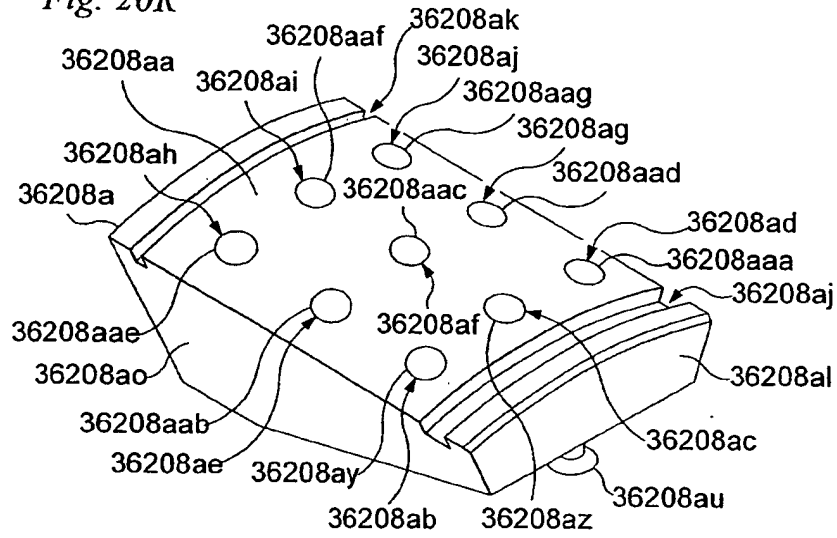
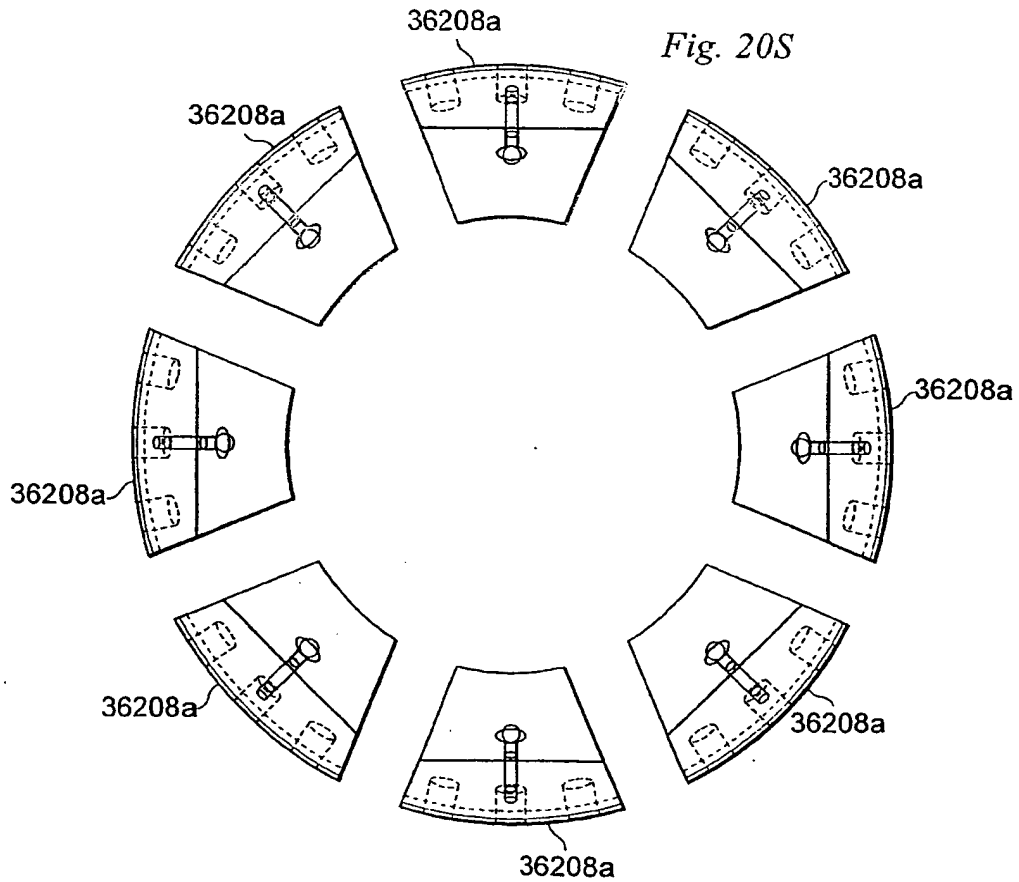
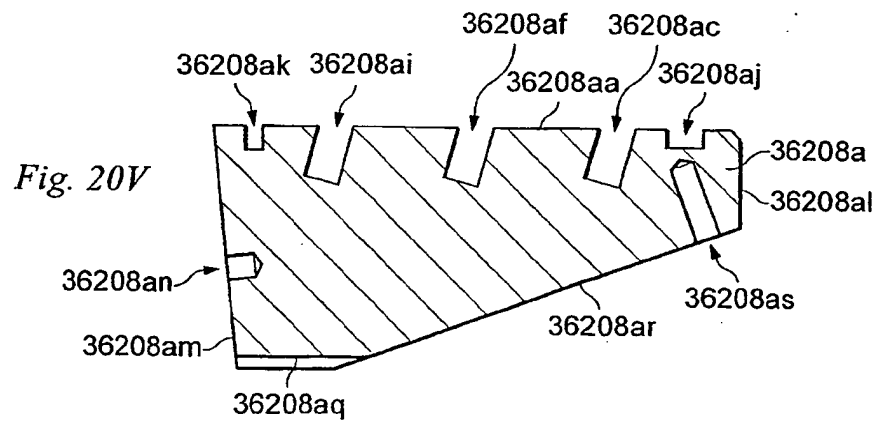
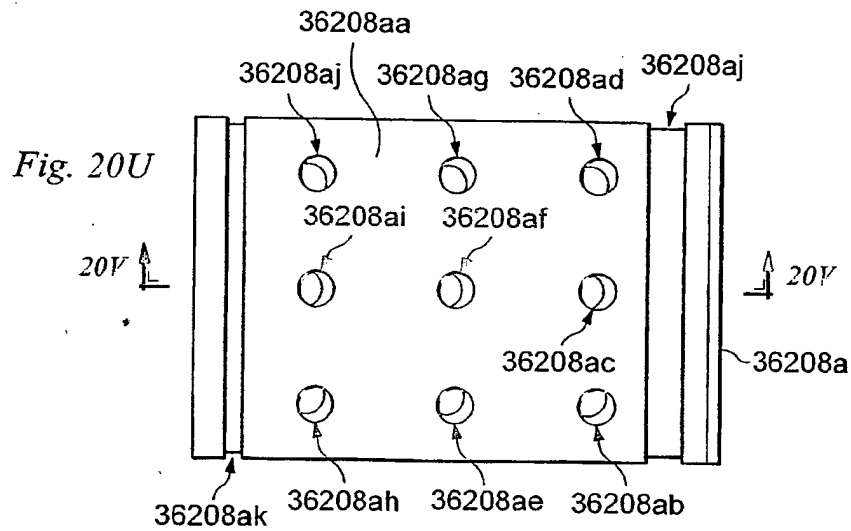
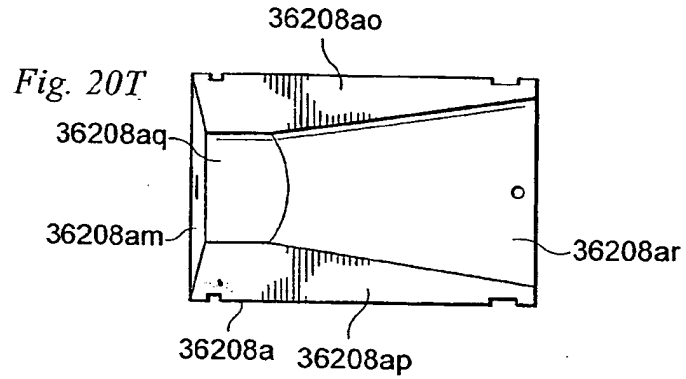


Fig. 20S



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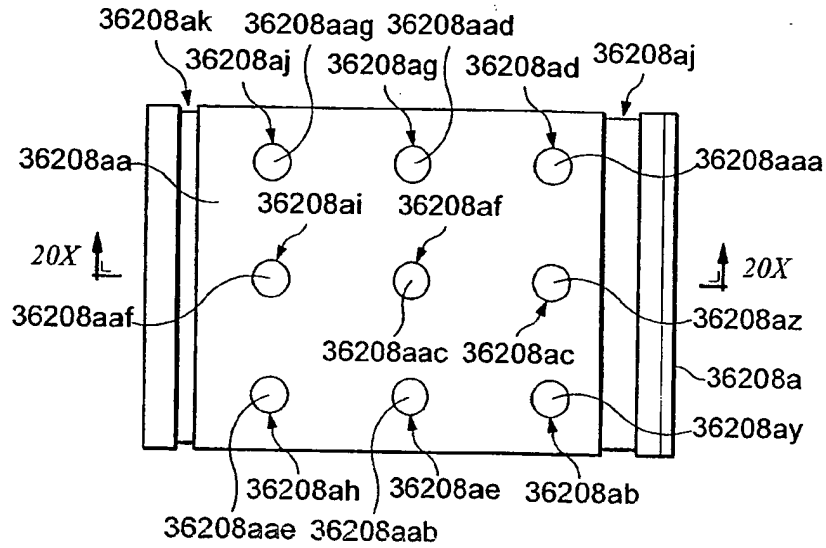


Fig. 20W

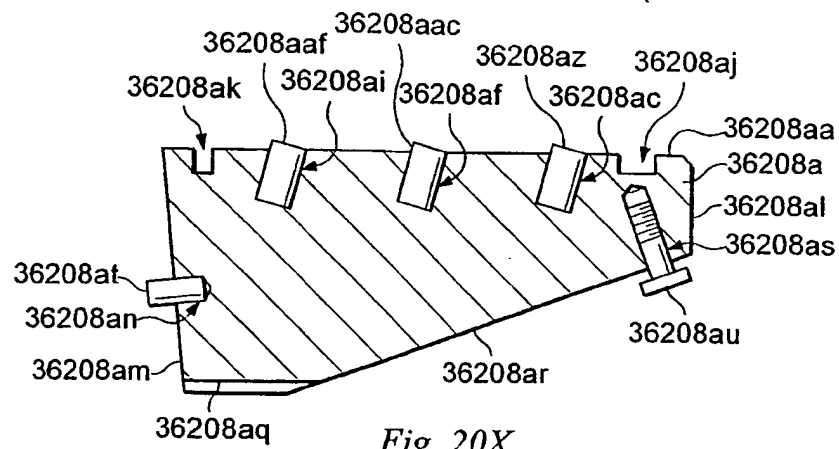


Fig. 20X

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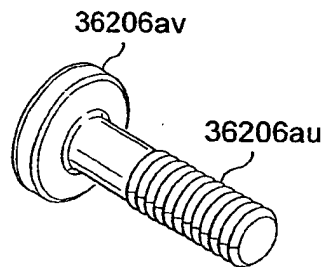


Fig. 20Y

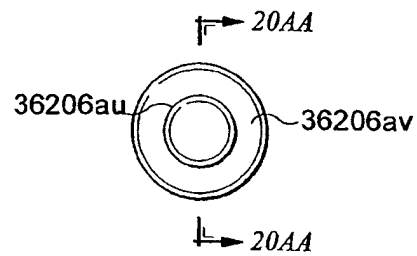


Fig. 20Z

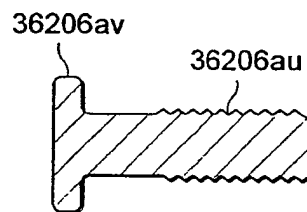


Fig. 20AA

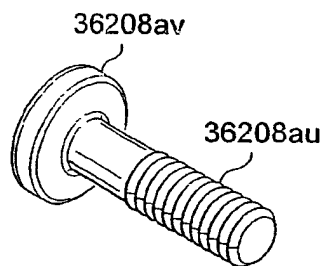


Fig. 20AB

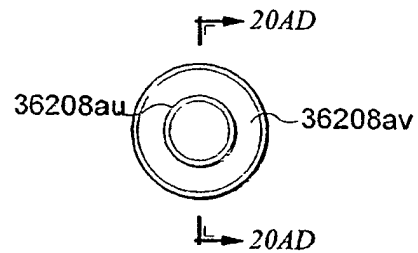


Fig. 20AC

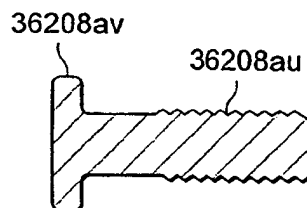


Fig. 20AD

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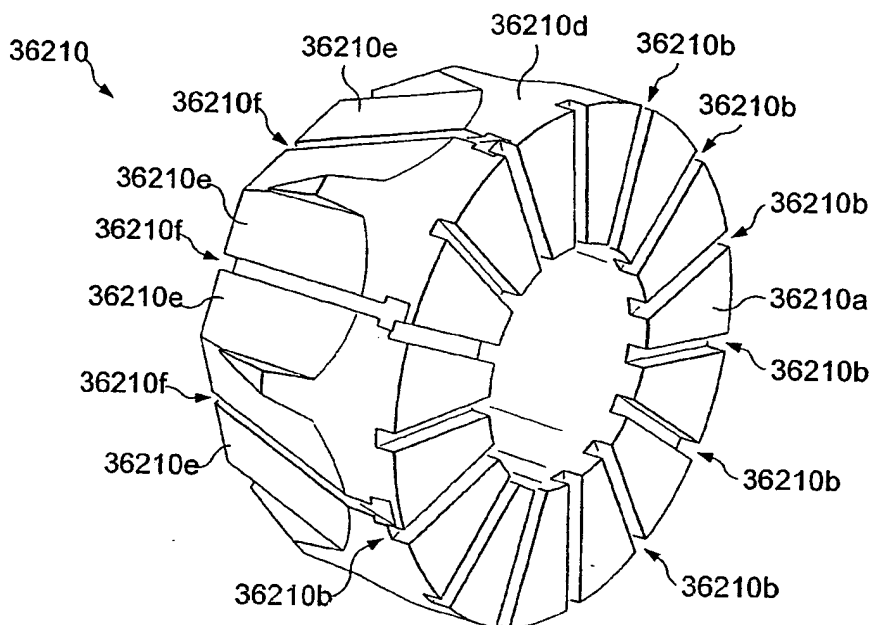


Fig. 20AE

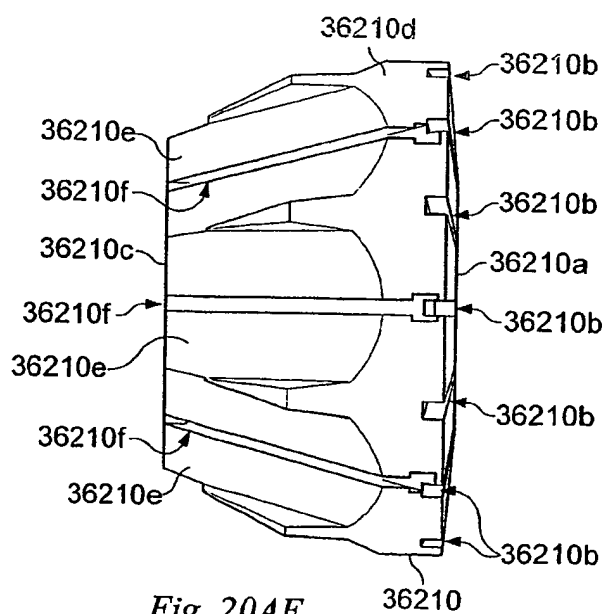


Fig. 20AF

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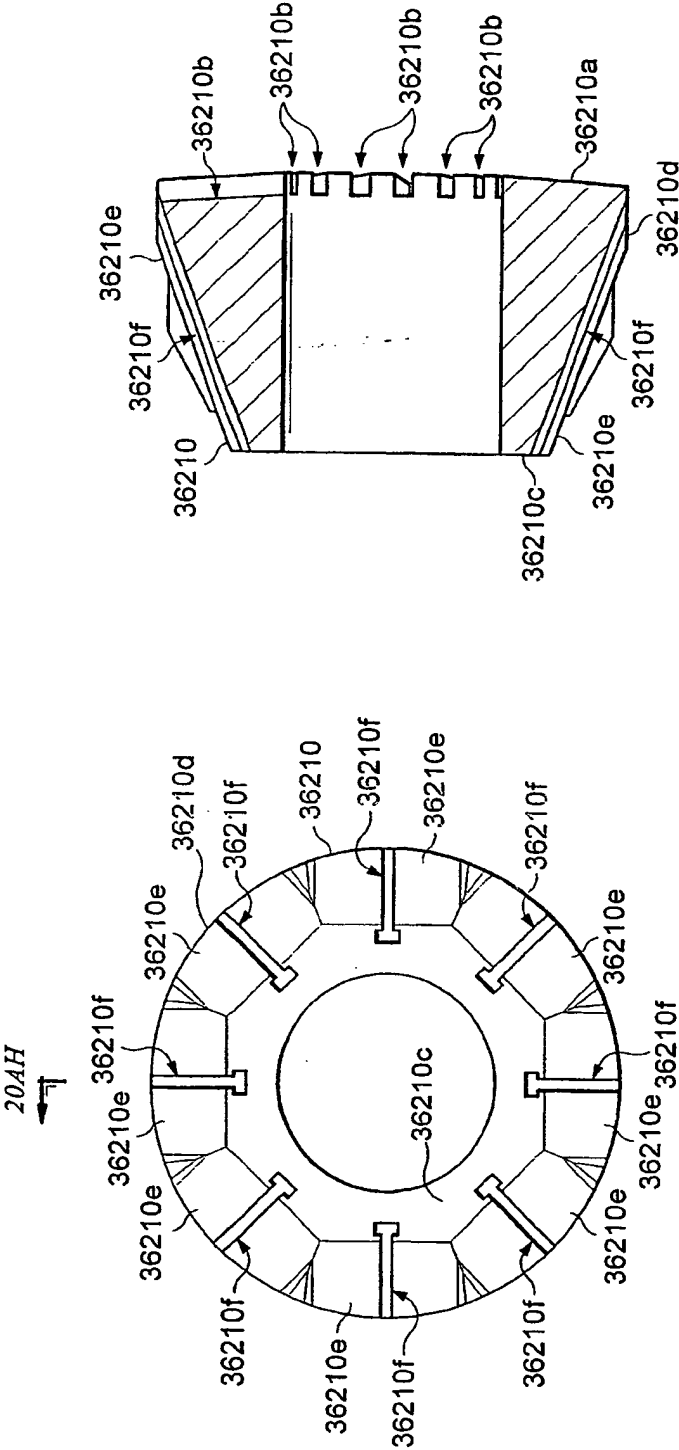
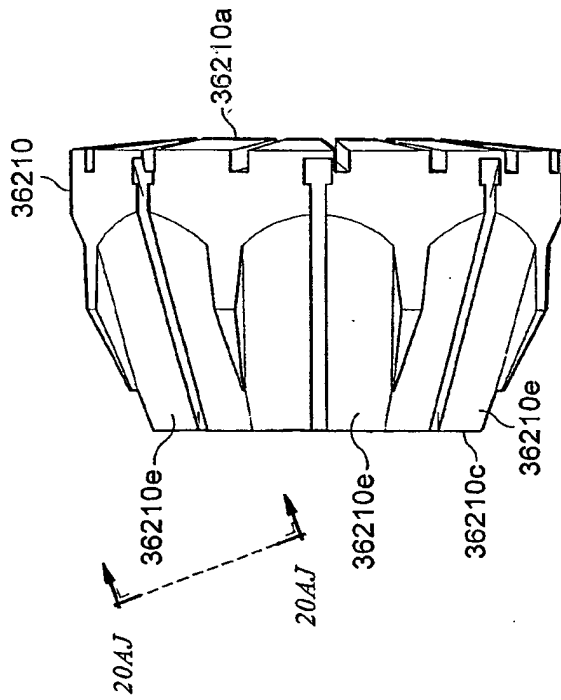
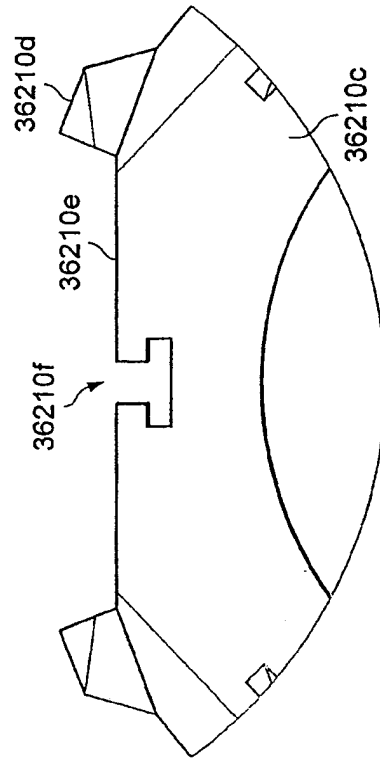


Fig. 20AH

Fig. 20AG



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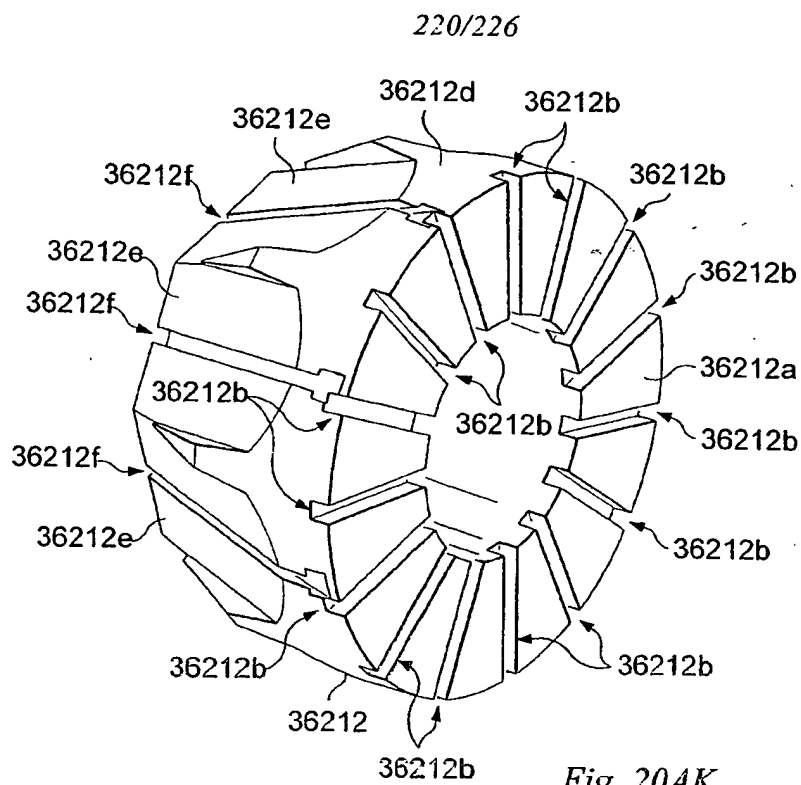


Fig. 20AK

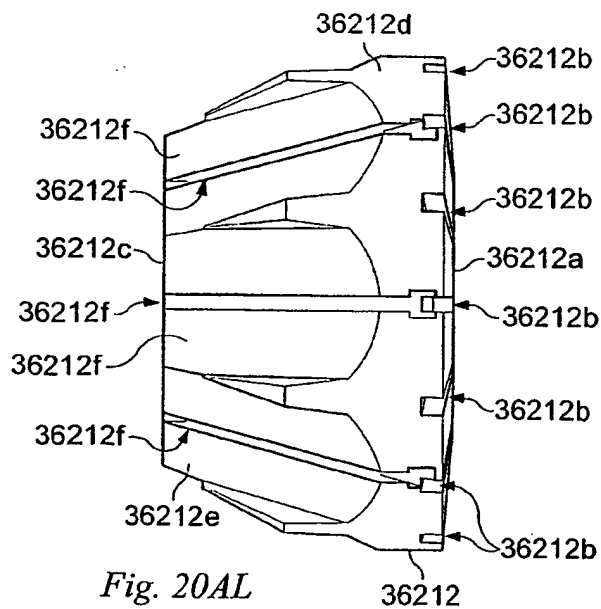


Fig. 20AL

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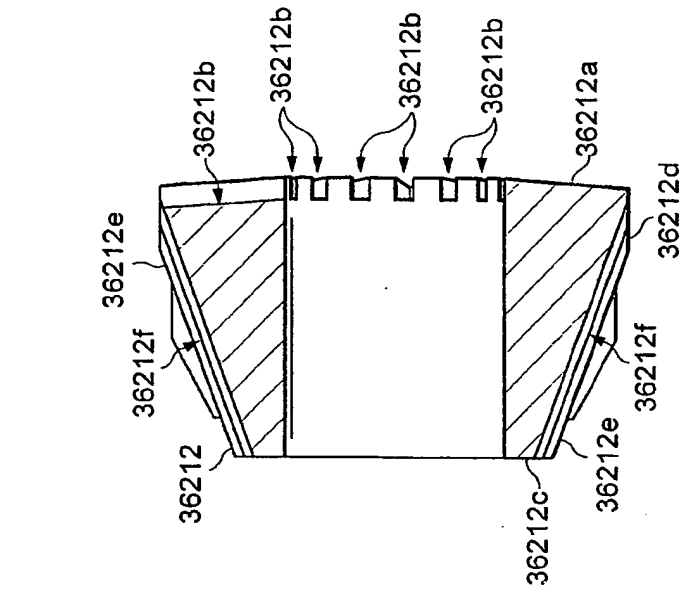


Fig. 20AN

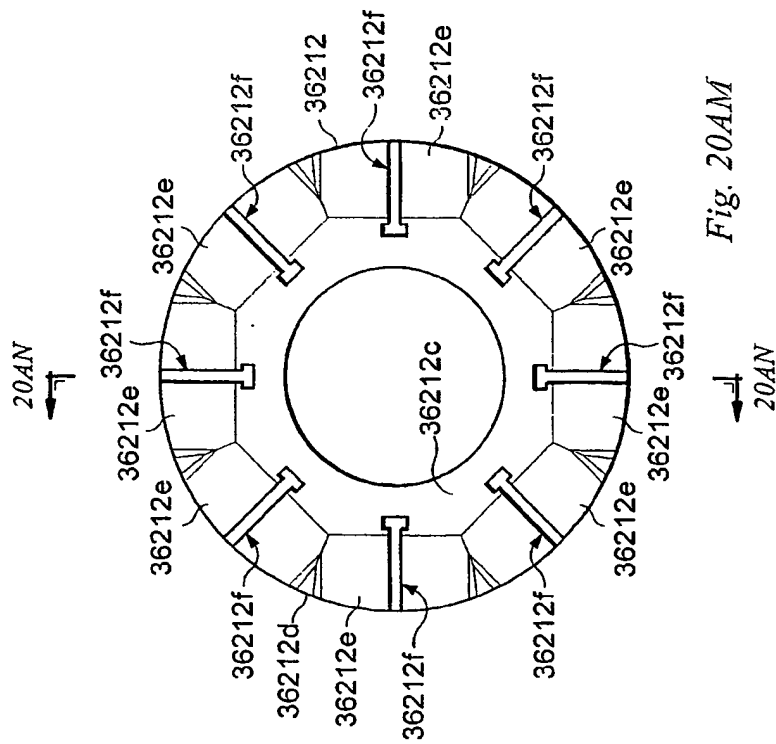


Fig. 20AM

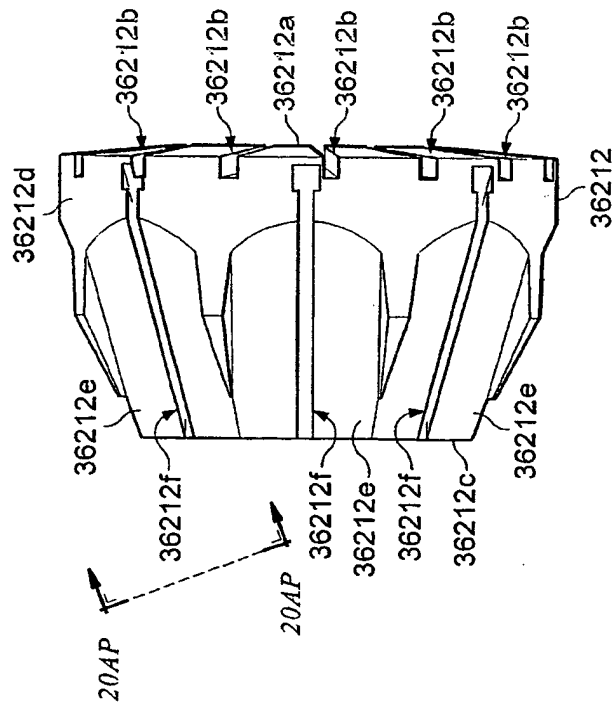


Fig. 20A

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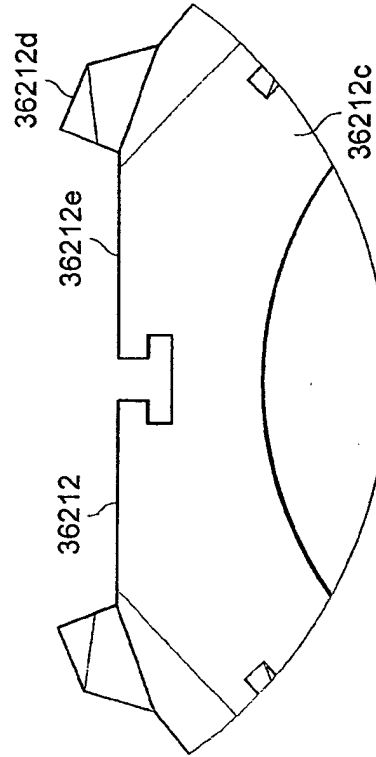


Fig. 20AP

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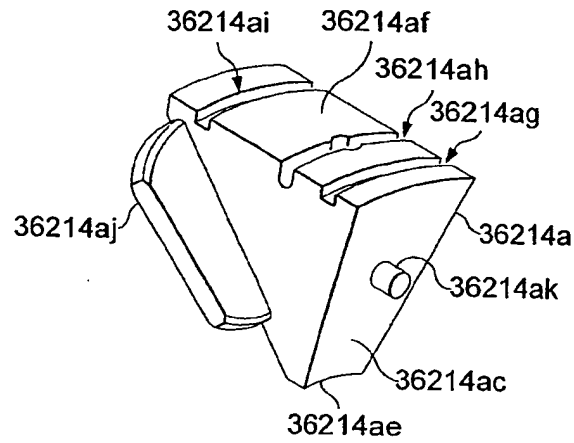


Fig. 20AQ

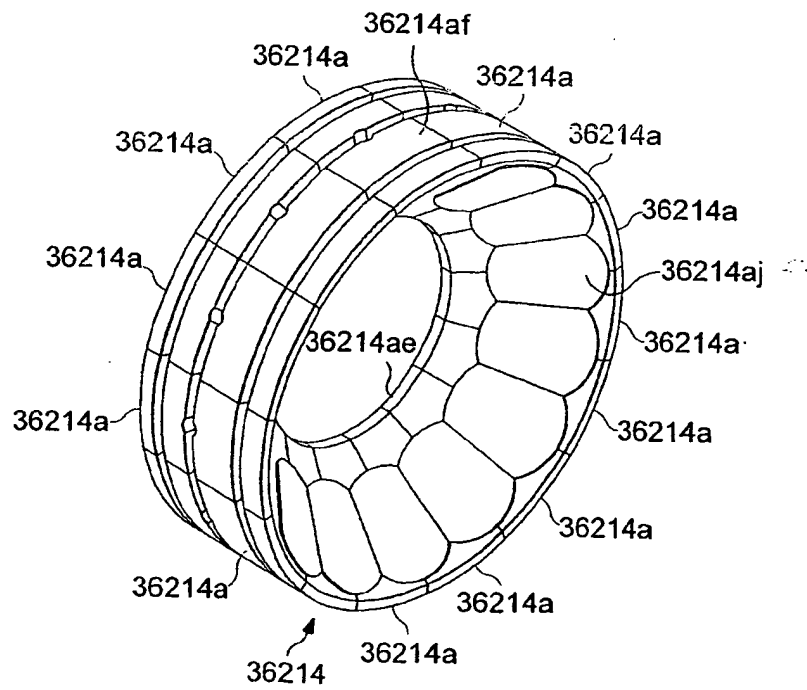


FIG. 20AR

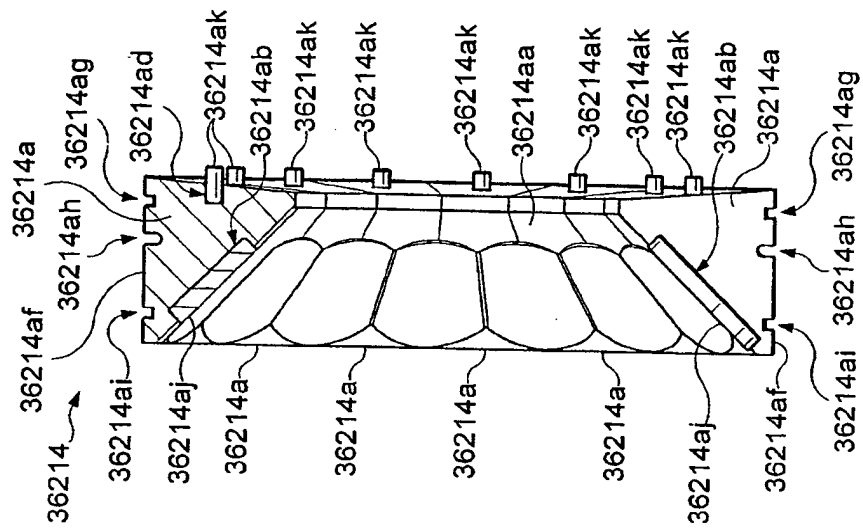


Fig. 20AT

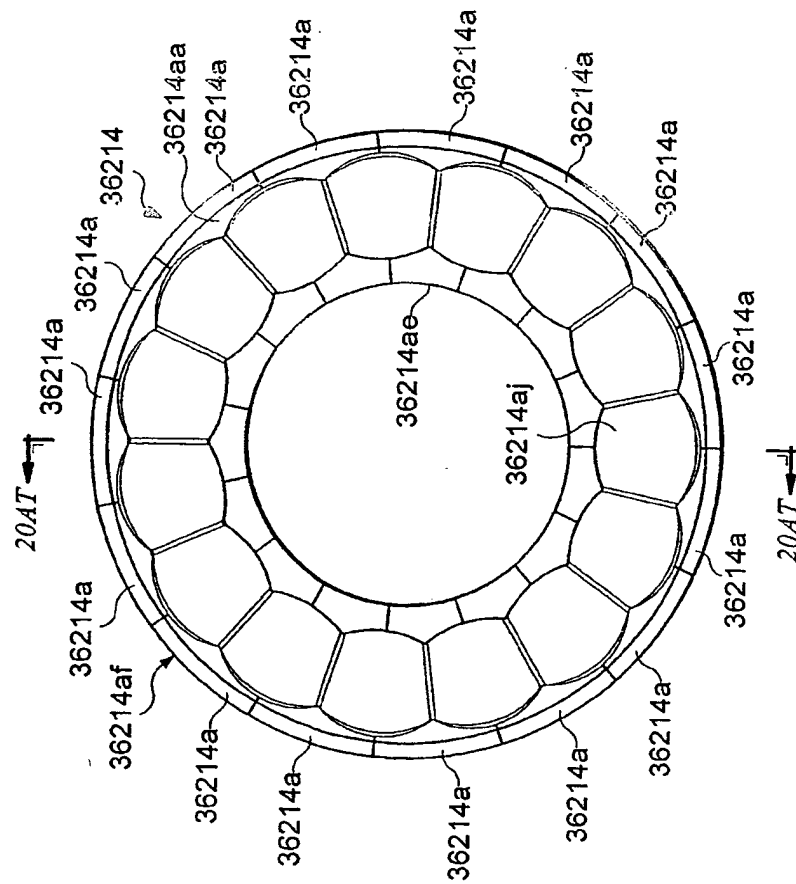
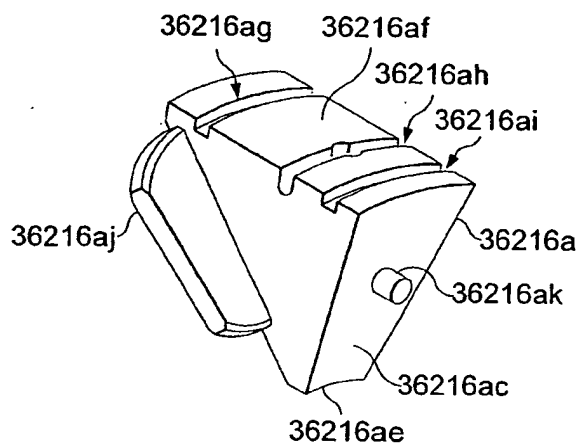
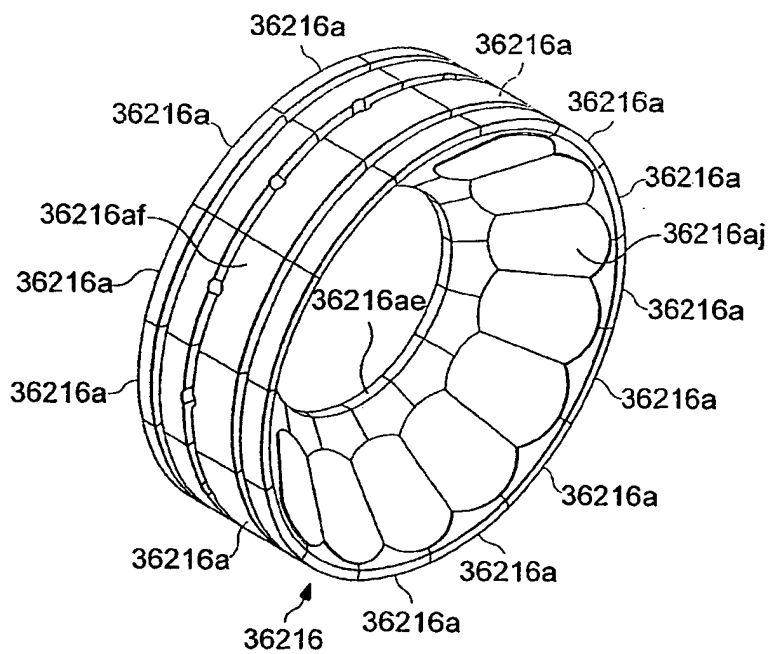


Fig. 20AS

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*Fig. 20AU*



*FIG. 20AV*

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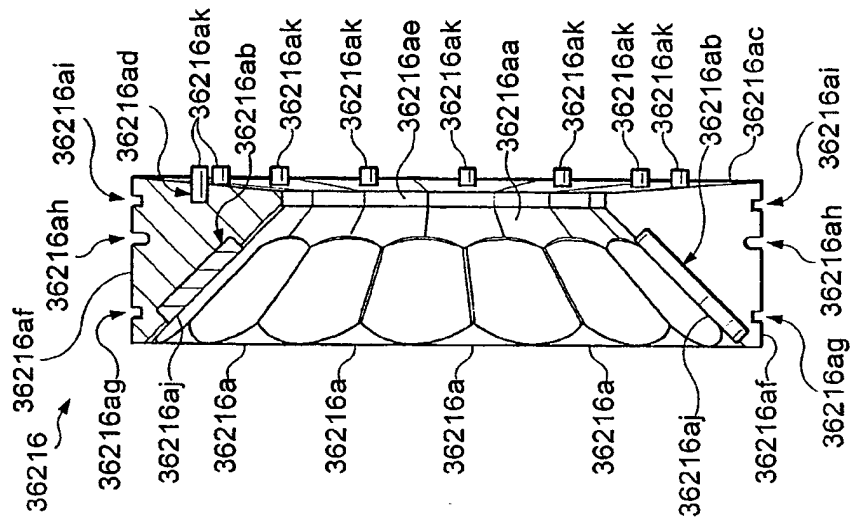


Fig. 20AX

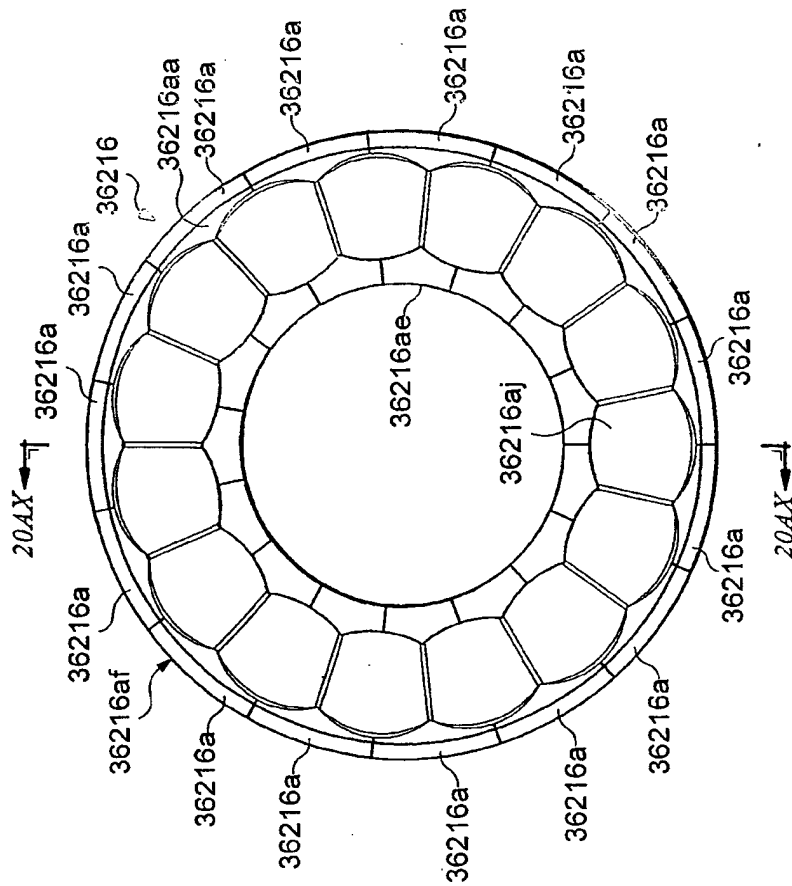


Fig. 20AW